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THE ADMINISTRATIVE CONTROL OF TUBERCULOSIS.*

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Grand Rapids.

Consumption is the most prevalent and the most fatal disease known at the present time, it being estimated that from one-seventh to one-sixth of all deaths, and one-third of the deaths between the ages of 15 and 45 are due to tuberculosis. In Michigan the mortality from this disease alone is greater than that from diphtheria, croup, typhoid fever, scarlet fever, measles, cerebro-spinal meningitis and smallpox combined; and it is estimated that in the United States 150,000 deaths occur annually from consumption. As Osler says "In more than 400 homes of this country there are lamentations and woe to-day; husbands for their wives, wives for their husbands, parents for their children, children for their parents. A mere repetition of yesterday's calamities. And if the ears of your hearts are open you can hear as I speak the beating of the wings of the angel of death hastening to the 400 appointed for to-morrow."

Owing, however, to the fact that thous-

ands of cases of tuberculosis recover every year, and that many who have the disease die from other causes, and also because many cases are not diagnosed during life, it is only by post mortem examinations that we get anything like a correct estimate of the extraordinary prevalence of this disease in the human race. Such examinations show that consumption is much more common than it was formerly supposed to be.

In 44,250 successive autopsies in Breslau in 1893, gross lesions of tuberculosis were found, in one-third. Biggs of New York found characteristic lesions in the lungs alone of sixty per cent. of his autopsies. Of these a little more than half died from this disease. The remainder recovered and in many instances had not known of its existence. Vrouardel found microscopic evidence of tuberculosis in seventy-five per cent. of his cases at the Paris morgue. Since many cases show lesions that can be seen with the microscope only, it is evident how difficult it is to form a correct estimate of the frequency of the disease. Exceedingly interesting statistics on this point have been obtained from the results of 500 autopsies made by Naegeli at the Pathologi-

*Oration on General Medicine, delivered at the annual meeting of the Michigan State Medical Society, 1905.

cal Institute of Zurich, as follows: Tuberculosis during the first year of life is seldom found. From the first to the fifth year it is infrequent. From the 5th to the 14th year one-third of all bodies are found to be tubercular. From the 14th to the 18th year tubercular lesions are found in one-half of all autopsies. From the 18th to the 30th year ninety-seven per cent. of all cases show tubercular changes. After the 30th year indisputable evidence of tuberculosis is found in ninety-nine per cent. of all autopsies."

From his work Naegeli reached the following conclusions:

"First, before the 18th year recovery from tubercular lesions is infrequent.

Second, in the third decade one-quarter of all cases show tubercular changes, which have completely healed. In the 4th decade two-fifths of all cases show lesions in which recovery has taken place.

From this time on the number of healed cases gradually increases until it reaches three-fourths of all cases at the age of 70 years." Necker, of Vienna, and Burkhardt, of Dresden, have almost duplicated this work of Naegeli's. Necker, however, believes that not all foci which are called tubercular by Naegeli were really such; but after eliminating twenty-three per cent. of the disputable cases it is safe to conclude, as a result of the work of these three men, that seventy-five per cent. of all adults at one time or another are subject to tubercular disease.

Hippocrates described pulmonary tuberculosis as a disease most difficult to treat and most fatal to the greatest number. Its contagiousness was recognized by various men throughout the middle ages, and in 1865 Villamen demonstrated by experiments on animals that tuberculosis could be transmitted from one individual to another. So that when Robert Koch in 1882 gave to the world his discovery of the tuber-

cle bacillus as the specific etiological factor in consumption, it is indeed remarkable that scientific men in general, and sanitarians in particular, did not at once institute a campaign for the eradication of this preventable disease. But, as Tennyson says: "Knowledge comes but wisdom lingers."

There is a great tendency on the part of physicians, as well as of lawyers and theologians, to pay undue deference to the teachings and writings of their predecessors, and to adhere to the traditions of their ancestors; and it is only in recent years that the medical profession has begun to make an earnest effort to take advantage of facts which have long been known, in an endeavor to eliminate the tubercle bacillus as a cause of death.

The communicability of pulmonary tuberculosis is now so well known and so generally recognized by the medical profession, that I will not take up your time with any arguments on this point. About ninety-six per cent. of all deaths from tubercular diseases are due to pulmonary tuberculosis, and it is generally believed that a large proportion of these cases are caused by inhalation of the tubercle bacillus, the *usual* source of which is the expectoration of consumptive persons. Sir. Wm. Broadbent echoes the sentiments of sanitarians throughout the world when he says that the prevention of the spread of consumption resolves itself into the destruction of the sputum of those affected with the disease, which we know retains its virulence for a long period of time. Outside of the body the bacilli are found most frequently in the dust of rooms which have been frequented by tuberculous persons, and it has been repeatedly shown that dust collected from hospitals, asylums, prisons, hotel bedrooms, private houses, etc., where consumptives have been, is capable of producing the disease in animals. Such

dust may retain its power of producing tuberculosis for weeks or months. In ordinary breathing expired air is free from bacilli. When talking, however, there is an invisible spray constantly emitted from the mouth, which has been shown to contain tubercle bacilli. This is more apt to be the case in forcible talking, hawking, spitting, etc., and Flugge says this spray is a greater source of danger than the dry sputum.

Tubercle bacilli are seldom inherited. The germ may pass from a tuberculous parent into the foetus, which may then be born with tubercular lesions; but this has been seen so rarely that it simply enables us to affirm that the inheritance of the bacillus is not impossible. Although congenital tuberculosis has long been regarded as a curiosity, Osler says there are now twenty such cases in man on record, enough to show that inherited tuberculosis *does* exist. Tubercle bacilli *may* be present in the placenta of a tuberculous woman. In twenty examinations they have been found in forty-five per cent. of the cases, so that Welch believes tubercle bacilli may be present at birth in the offspring of a goodly percentage of cases of maternal tuberculosis. But for all practical purposes the sanitarian is bound to consider that tuberculosis is not an hereditary disease, and that every case arises under circumstances which can in a great majority of instances be theoretically if not practically prevented. In this connection I wish to quote the conclusions of the recent congress at Berlin. "First, tuberculosis is a communicable disease, due to Koch's tubercle bacillus acting on an organism prepared to receive it and unable to resist the bacilli when present in large numbers. Second, tuberculosis may be prevented by removing the source of in-

fection, by improving the environment, and by strengthening the individual. Third, tuberculosis in many of its severe varieties can be cured."

These propositions are now accepted as scientific truths. In certainty they may take rank with the laws of gravitation.

Although tuberculosis itself is seldom hereditary, there is a certain type of structure which has marked hereditary characteristics on account of which feeble resistance is offered to the invasion of the tubercle bacillus. The relative importance of the soil as compared with the seed has been much discussed. Many of the foremost scientific and clinical men to-day believe in the doctrine of predisposition. Long before Koch's discovery the tuberculous or strumous diathesis derived from inheritance was considered to play a very important part in predisposing to tuberculosis, and we are now also certain that such is the case. Experience teaches that vulnerability or predisposition to consumption runs in families. The same is true of measles, scarlet fever, and other infectious diseases. This individual or family susceptibility may be either inherited or acquired, and it is not always easy to distinguish between the influence exerted by heredity and that exerted by bad food, exposure to cold, foul air and other conditions which lower vitality and render the individual a ready prey when infected.

There can be no doubt that some infectious diseases, as measles and whooping cough, predispose to tuberculosis by rendering certain of the groups of lymphatic glands, such as the cervical and bronchial, a suitable soil for the propagation of the specific bacillus. Predisposition may pertain to the individual only, or to the entire race. Like rickets, tuberculosis among the natives of Africa is a comparatively rare disease. The same was also true of the colored people of the South before disenfranchisement. At the present time, how-

ever, a large proportion of the colored race in the South are affected, the death rate among them from consumption in some sections being three times that among the whites.

While the inhalation of tubercle bacilli is considered by most authorities as the chief source of pulmonary tuberculosis, there are not wanting those who consider other sources of infection as of paramount importance. Behring believes that the principle source of tuberculosis in human beings is the milk with which infants are fed, and that all cases of tuberculosis in adults originate from infection in infancy or childhood, thus attributing a large per cent. of cases to bovine rather than human tubercle bacilli. This is quite the opposite of the view expressed by Koch in his memorable paper in London, in 1901. Since then a great deal of work has been done by various investigators to determine the relation between human and bovine tuberculosis. It is now quite generally recognized that human bacilli may cause tuberculosis in cows, and there is already evidence enough on record to enable us to say that bovine tubercle bacilli may be found in children with tuberculosis. Kober, of Washington, has collected 85 cases of human tuberculosis due to infected milk. The part played, however, by bovine tubercle bacilli in causing tuberculosis is a most difficult one to determine. Welch stated many years ago that tubercle bacilli may enter the body without leaving any lesion at the point of entrance, and it is impossible to deny that a considerable proportion of cases of pulmonary tuberculosis may be due to infection from the gastro-intestinal tract. He also states that post-mortems show that forty to eighty per cent. of all cases of pulmonary tuberculosis have intestinal lesions, nor is it possible in all cases to tell which is the primary and which is the secondary lesion. Primary in-

testinal tuberculosis may be caused by bacilli entering the respiratory passages as well as the gastro-intestinal, and it has been shown by cultural as well as other experiments that in the great majority of cases of primary intestinal tuberculosis the bacilli are human, and not bovine. It will take a large amount of work to definitely determine in what degree Behring is correct in his opinion that infection in man is mostly through the intestines, and is contracted at a very early age, lying latent for years. But enough is known to warrant us in the conclusion that the State, which does so much to prevent the spread of other infectious and communicable diseases, should do more to limit the spread of this fatal disease by preventing the sale of milk from tuberculous cows. The exclusion from dairies of every cow which has demonstrable disease of the udder would form some approach to security; but as tubercle bacilli have so frequently been found in the milk from cows which are free from udder disease, and as such disease is so difficult of recognition in its incipency, I believe all cows responding to the tuberculin test are possible sources of danger, and the sale of their milk should be prohibited. The state should pass laws compelling a systematic inspection of all dairies and cowsheds within its borders, and of all cows whose milk is placed upon sale. Tests with tuberculin should be made, and the sale of any milk from a dairy wherein a tuberculous animal is found should be prevented by a prohibitive penalty until such animal is excluded from the herd. This does not mean, by any means, that all such animals should be slaughtered, for the method of treating tuberculous herds in Denmark, which has been thoroughly tried in parts of our own country, shows that the disease can be weeded out in a practical manner. The sale of re-acting animals

should be prohibited except for immediate slaughter, it often being possible to use the meat under certain conditions. Neither statistics nor experience indicate that tuberculosis is communicated to any great extent through the agency of meat, for the greatest diminution in the death rate of tubercular disease has occurred at those ages when meat is most largely consumed; and we know that tubercular deposits are very seldom found in those portions of the carcass which are sold for food.

It has been found also that animals affected in the earlier stages, which are kept under favorable hygienic conditions, will live frequently for years without the disease making any apparent headway, and the progeny of such animals is scarcely more liable to tuberculosis at birth than those of non-reacting animals. Such calves have in all cases at the Wisconsin Agricultural Experiment Station stood a tuberculin test without reaction, showing that tuberculosis in cows is contracted after birth rather than inherited from diseased mothers. If such calves are removed from the infected atmosphere and placed under good hygienic surroundings and fed on milk free from tubercle bacilli, they will not show any taint of the disease. Treated in this manner the labor of years spent in careful and selected breeding, and the large money values involved, are not needlessly destroyed.

Another conclusion to be drawn from Behring's work is that too much attention cannot be given to the conditions surrounding children during the early years of life, and that every effort should be made to improve their physical condition so as to enable them to withstand the inroads of tubercle bacilli which may have gained entrance to the body.

The most important sanitary problem of to-day is that of the eradication of pulmonary tuberculosis, but I do not believe that

proper measures for the suppression of this disease can ever be enforced until the public in general, and especially that portion of the people who either have the disease or are intimately associated with those suffering from it, become properly educated on this subject. And here I wish to state emphatically that I do not mean alarmed, but educated in a rational way; and it is for the purpose of enabling this to be done that I believe the State should insist upon compulsory notification of every case of tuberculosis. If good is to be accomplished it is not to be done by starting a panic, but by giving the people such a knowledge of this disease that they will know exactly where the danger lies. It should be impressed upon them that this is principally in one direction, namely—the sputum. It should be constantly kept in mind that it is the sputum, and the sputum alone, that is chiefly concerned in the spread of consumption. I think there is too great a tendency to the use of the word "contagious" in this connection, as it gives rise to needless alarm. The word "transmissible" or "communicable" is much better, and is far less disturbing to the people. The minute you use the word "contagious" in connection with a disease the mental image formed is that of acute contagion such as exists in smallpox, scarlet fever, measles, etc.

Consumption differs from these diseases in this important particular, that whereas in the latter infection is almost entirely beyond the control of a person, in pulmonary tuberculosis it is limited to the sputum, the disposal of which can very easily be controlled.

While consumption is always the result of infection, it is far less readily communicated than the diseases just mentioned, which are transmissible from individual to individual by immediate or direct contact, for which the word "contagious" should be reserved. The popular idea of a contagious disease is

one from which there is no escape except by keeping away. When you proclaim a disease to be contagious, people will pay no attention to the conditions of safety which you may lay down, and social ostracism is sure to follow. Isolation, however, or any form of personal restraint upon consumptives who will faithfully follow and carry out a few simple measures for rendering their sputum innocuous, is entirely unnecessary. With these precautions there is practically no danger from even intimate association with such people. The most certain method of getting correct information as to the etiology, dissemination and prevention of consumption into the hands of the people who need it, is for each and every case of tuberculosis to be reported to those whose business it is to look after the sanitary affairs of the State. As far as immediate prevention itself goes the notification of the pulmonary form of the disease alone would suffice. Several forms of tuberculosis, as hydrocephalus and meningitis, cannot be called infectious in any sense, neither can tubercular glands, bones or joints communicate disease until a discharge is established. But in order to enable us more thoroughly to study its life history and manner of dissemination, all forms of tuberculosis should be brought to the notice of the health authorities. People must be taught that consumption is by no means a necessarily fatal disease, but that on the other hand, a large majority of cases, if taken in time, can be cured. It is to the interest of both the patient and his healthy neighbor that the former be informed of these facts. Post mortem examinations show that from forty to eighty per cent. of cases of consumption have also intestinal lesions, and the chances of recovery are by them greatly reduced. People should be taught that these lesions may in great part

be prevented by immediate disinfection of the sputum. A consumptive who is well on the road to recovery may diminish his chances of regaining health by self-inoculation if he does not exercise the greatest care in destroying his sputum; and the fact that any consumptive may be a source of danger not only to himself but also to his associates if his sputum, which may contain from one to four billion bacilli per day, is not destroyed, should make him doubly anxious for correct information on these points.

Every one now agrees that enforced registration is necessary. Without this any other scheme for the restriction of consumption is useless.

The city of New York inaugurated a system of notification in 1893. For several years public institutions only were required to report cases coming under their supervision; private physicians were simply requested to do this. But in 1897 regulations were adopted requiring the reporting of all cases of tuberculosis, the same as of measles, typhoid and scarlet fever. Since then continuous pressure has been brought to bear upon physicians to report their cases, until at the present time there is no serious opposition to this regulation in or out of the profession. In fact, less trouble is now experienced in the sanitary supervision of tuberculosis than in that of any other communicable disease. In 1904, 19,000 cases were reported in New York City, and 7,000 in the first four months of this year. Investigation has shown that nearly ninety per cent. of the deaths returned as due to tuberculosis have been previously reported to the department of health as suffering from tuberculosis, so that the regulation is quite generally observed by the physicians of that city.

The result of this and other measures for the control of the disease has been a more rapid fall in the tuberculosis death

rate in New York City than in any great city in the world, namely: from 29.1 per 10,000 in 1892 to 22.8 per 10,000 in 1902, being a much more rapid decrease in the death rate from tuberculosis than is found in such cities as Baltimore, Philadelphia, and St. Louis, where no special efforts were made against the disease during those years.

The economic loss to the State from tuberculosis is very great. Dr. H. W. Thomas, of Chicago, has estimated that the loss in money invested in the raising of children who die yearly in the State of Illinois under the age of 20 years from consumption is \$1,181,800; the loss from inability to work on the part of those sick from consumption, \$30,000,000; the loss of savings of those who die before the end of the producing age, \$5,139,000; the care of sick and helpless consumptives, \$225,000; making a total loss to the State of Illinois from consumption of \$36,000,000 per year. These estimates are based on absolute statistics gathered by the Illinois State Board of Health in 1902 and 1903. The population of Michigan is one-half that of Illinois, and the death rate from tuberculosis is about five-sevenths of that of Illinois, so that it is fair to presume that the cost to the State of Michigan every year from consumption is about \$15,000,000.

Dr. Frederick L. Hoffman, actuary of the Prudential Life Ins. Co., has made some interesting estimates of the loss to the United States each year from this disease. "Tuberculosis causes annually more than 150,000 deaths in the United States at the average age of 35 years. At this age the normal after-lifetime is about 32 years, so that the real loss of life covered, measured in time, is represented by \$4,800,000 years per annum. If we estimate that the net value of a year of human life, after 35, is at least \$50, the real loss resulting to the United States from this disease—a large

proportion of which is known to be needless—may be estimated at \$240,000,000 per annum. These astounding and almost incomprehensible figures are far from being an exaggeration, but assuming that only one-half of this mortality is preventable we have a net loss to the State of \$120,000,000 per annum. This estimate does not take into account the social, moral and sentimental value of at least 100,000 lives, which under different conditions might reasonably hope to continue for many years."

Thirty-two years ago the Michigan State Board of Health was organized, and since that time the death rate from consumption has decreased from 112 per 100,000 inhabitants to 86 per 100,000 inhabitants in the five year period 1898 to 1902. Owing to the imperfect registration under the law then in force, Dr. Wilbur chief of the Division of Vital Statistics in the Department of State, assures me that the rate of 112.1 per 100,000 ought to be increased 40 to 50 per cent. A very interesting fact in this connection is that about one-half of this remarkable diminution in deaths from consumption in Michigan has taken place in the last ten years, during which time the Board has been conducting a special campaign of education against the disease. If to the measures already instituted could be added those other measures for the restriction of the disease which sanitarians have evolved in recent years, it is estimated that in fifty years consumption would be practically eliminated as a cause of death in Michigan. It must not be overlooked in this connection, that the decrease in mortality of this and other communicable diseases since the organization of the Board has resulted in a very great saving to the State, amounting in the case of consumption to \$583,000 in the year 1903; \$176,000 for smallpox; \$301,000 for typhoid fever;

\$298,200 for scarlet fever, etc., estimating the value of an adult life at \$1,000 and a child's at \$300. I would not have you infer that I believe the whole of this decline in the death rate from consumption in this State has been the result of the efforts of the State Board of Health, for many other factors have undoubtedly contributed to it, such as a profound change for the better in the mode of life of the people. But the great and rapid fall in the death rate from tuberculosis in the city of New York which is ascribed to the direct results of the application of modern sanitary methods of prevention, warrants us in the belief that the pioneer work done by the Michigan State Board of Health in the prevention of tuberculosis has been more or less directly responsible for the pronounced decline in mortality from this disease since 1891.

Another important administrative measure for the control of tuberculosis is the early diagnosis of all cases, and to that end boards of health throughout the State should make free examination of all samples of sputum sent to them. One of the most important problems in the restriction of this disease is the early recognition of the individual case, and one of the most important of the early diagnostic signs is the recognition of the presence of the tubercle bacillus in the sputum. A large percentage of cases can be diagnosed, by an expert, with a high degree of certainty before the bacilli appears; but for the general practitioner an absolutely certain diagnosis rests upon a demonstration of tubercle bacilli in the sputum. The proportion of physicians who make such examinations is relatively small, and it is surprising to see how many cases of consumption are treated from the beginning to the end without any sputum examination whatever. Experience in New York City has shown that by offering free examina-

tions of sputum many cases of consumption are brought early to the attention of the authorities, thus affording an opportunity for early educational efforts. The ordinary coughing consumptive expectorates from one to four and one-half billions of tubercle bacilli a day, and early recognition of such cases is a matter of great importance from a sanitary standpoint.

One of the most important of the prophylactic measures for the restriction of tuberculosis is the establishment by the State of special hospitals for the management of indigent cases of the disease, and I believe that the time will come when every large community will have in its immediate vicinity a hospital for the care of its consumptive poor. These sanatoria should be of two kinds; one for the treatment of incipient cases, and the other to afford shelter for incurables, homes for advanced cases which are often confined to rooms whose surroundings are hygienically bad, and which are daily becoming worse by reason of the absence of those special precautions which are so necessary to prevent the spread of the infection. The care of these hopeless cases is quite as much a part of the duty of the State as is the treatment of those in the early stages of the disease, as cases in the later stages are those from which the disease is most often spread; and every county in the State should have either in connection with its poor house, or elsewhere, a properly equipped ward for the care of the hopeless cases.

Formerly climate was looked upon as the most important factor in the treatment of consumption, but the experience of special hospitals all over the world, in all sorts of climates, has shown that tuberculosis may be successfully treated anywhere, that pure air, sunshine and pure food are the essen-

tial features in its treatment. Moreover, cures accomplished in the home climate are perhaps more lasting and assured than when attained by temporary residence elsewhere.

Some sanitarians claim that seventy per cent. of incipient cases recover. At the Massachusetts State Sanatorium, at Rutland, in the year 1900 seventy-three per cent. of the incipient cases were arrested and apparently cured; in 1901 seventy-eight per cent.; in 1902 seventy-two per cent.; in 1903 seventy-three per cent.; in 1904 seventy-six per cent. During the last 15 years sixty-eight per cent. of Trudeau's incipient cases have been cured or the disease arrested, but only eleven per cent. of his advanced cases. So that we can safely estimate that proper treatment in sanatoria will cure from sixty to seventy-five per cent. of incipient cases of consumption. Cures in moderately advanced cases are infrequent, while advanced cases are seldom permanently benefited. Incipient cases only should be received into a State sanatorium, and it should be distinctly understood that these institutions at the present time are not homes for incurables. The Massachusetts State Sanatorium rejects, as a rule, the following class of cases:

1. Those who are bed-ridden or confined to their rooms.
2. Acute cases, with high fever; cases whose temperature will not reach 100 degrees in the afternoon after two weeks treatment.
3. Advanced laryngeal cases.
4. Those with chronic diarrhoea, kidney disease or any other serious complication.
5. Neurotics.
6. Confirmed dyspeptics.
7. Those with marked dyspnoea on slight exertion.
8. Neurasthenics, or those with marked insomnia.

9. When a large part of one lung, or when both lungs are involved.

10. Cases with decided emphysema or bronchitis, which should seek a warmer climate, although all cases at Rutland in general do better in cold weather.

11. Children under 14 years of age, and adults over 50.

The usual stay at the sanatorium is six months; no case is permitted to remain at Rutland beyond one year.

Acceptable cases are:

1. Those with tubercle bacilli in the sputum, no matter how well they look, and cases before any expectoration whatever is present.

2. Afebrile cases. These are considered the most desirable. The first attempt at the sanatorium is to bring the temperature to normal.

Dr. Bowditch likes to get cases before cough, expectoration, or haemoptysis are present, although cases which have had haemoptysis are accepted as readily as others if the heart is normal. He considers haemoptysis a good thing in the early stages of pulmonary tuberculosis if it is not frequently repeated, but bad in all late cases.

In spite of the great care on the part of the state examiners for Rutland a majority of the cases treated there since the sanatorium was opened have not been really incipient cases.

Among other administrative measures for the control of tuberculosis which have been found useful by the New York City Board of Health are educational measures consisting of circulars of information for consumptives and those living with them, printed in many different languages; the public press is utilized to a very large extent in the dissemination of knowledge as to the nature of tuberculosis and means to be adopted for its prevention. Doctors and nurses are sent to the homes of consump-

tives (unless the reporting physician especially requests that no such visits shall be made) to give instructions and to leave printed circulars for the information of the patient and the family; to gather data as to the history of the sick person, the number of cases of tuberculosis which have occurred, the sanitary condition of the premises, the precautions being observed, and the possible need of any further interference on the part of the authorities. Rooms or apartments which have been vacated by consumptives, either by death or removal, are disinfected or renovated. Hospitals for the care of consumptive patients are maintained and a special clinic and dispensary for the treatment of pulmonary tuberculosis is conducted.

During the past two or three years anti-tuberculosis societies have been formed in eighteen states in this country which have for their object the education of the public as to the prevention and cure of tuberculosis. In the month of March the Grand Rapids Anti-tuberculosis Society was organized, for the purpose of combating the spread of tuberculosis, to better the condition of persons suffering from it, and to promote their recovery:

1. By enlisting the co-operation of the people in general, the medical profession, and nurses in fighting the disease, and preventing the infection of well persons.

2. By investigating the causes of the prevalence of the disease, and by collecting and publishing useful statistics.

3. By disseminating information:

- a. To those suffering from the disease as to the best treatment and means of help.

- b. To those who come in contact with the disease as to the prevention of its spread.

- c. To the public as to the subject in general, and its bearing on the social life of the community.

4. By advocating the enactment of proper laws for the prevention of the disease.

5. By the advancement of movements to provide special hospitals, sanatoria and dispensaries for consumptives, and also by endeavoring to secure better care of consumptives in their homes through co-operation with the District Nurse's Association and the Charity Organization Society.

6. By co-operating with the public health authorities, the National Society for the Study and Prevention of Tuberculosis and other organizations, in measures adopted for the prevention of the disease.

During its brief existence it has already accomplished some useful things. At its suggestion the common council has resurrected an anti-spitting ordinance which has long been slumbering in one of its committees, and we hope to see it soon become a law. It has induced the Board of Health to require physicians to report all cases of consumption to the Health Department; a circular letter has been issued by the Board to all physicians of the city, requesting them to co-operate in this matter, and many cases of consumption have since been put on record. The society has agitated the dust nuisance question, along with the Board of Health, and as a result municipal street sprinkling has been instituted in three wards of the city, and before the summer is over it is expected the entire city will be covered. At its suggestion the Grand Rapids Board of Health has offered to make free examinations of all specimens of sputum sent to it. It has gotten out a large number of circulars for distribution to consumptives and has already given a number of popular lectures on consumption to various societies in the city, and has arranged for a large number of these lectures for the coming year.

It sent a delegation to Lansing to plead

for a State Sanitorium, headed by the mayor of this city, who, having been a very active candidate for the Democratic nomination for governor last year, made a deep impression upon the legislative committee. It has secured the hearty support of the newspapers of the city in its campaign.

Now, in addition to its expenditures in maintaining the State Board of Health, what is the State of Michigan doing directly to restrict the ravages of this deadly disease, and to prevent such an enormous loss of life and treasure each year? Almost nothing. In the year 1903 the various townships, villages, cities and counties of the State expended \$143,156 for the care of indigent persons sick with smallpox, which is about the least important of the diseases which endanger the public health, and \$1,347 for the care of those sick with con-

sumption, the most important of the diseases which endanger the public health. In a recent paper on consumption the late Frank Wells, for many years president of the Michigan State Board of Health, and a sanitarian with a national reputation, said: "Each one of these deaths was preventable; each one that is to follow will have been; and the responsibility for them will rest upon those, who, having the knowledge and ability to save, fail to act."

Here, then, is a disease which is constantly with us, manifestly preventable, and which at one time or another attacks a large proportion of the human race, concerning which the State has shown a neglect of sanitary laws that is almost criminal; and the question of the hour is: What is the State of Michigan, and the various cities and counties within its borders, going to do about it?

TREATMENT OF OPHTHALMIA NEONATORUM.*

EUGENE SMITH,
Detroit.

I do not propose to enter into the symptomatology or etiology of ophthalmia neonatorum, but to call to your notice a successful method of treatment, one feature of which, and in my mind an important one, is entirely ignored in all text books. Let me say at this time that I think it entirely unnecessary ever to lose an eye from this disease, if the physician sees the case before the cornea becomes affected. Notwithstanding our present knowledge of the pro-

phylaxis in these cases, I fear too little attention is paid to it by some members of our profession, and there are still too many cases of irremediable blindness occurring. However, it is the treatment I wish to speak of.

First, with regard to cold advised by many. It is understood that by means of cold compresses the heat of the inflamed parts is continuously removed, and not merely a high temperature interchanged for a lower one, as is the case where the compresses are so seldom changed that they become warm before replaced by fresh ones. Such contrasts are harmful. Prolonged and improper use of cold applications may cause inflammations as an after effect, not

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only at the seat of application, but also at some distance. Infants do not bear long continued abstraction of heat well. Carelessly used, excoriations, even erysipelas, bronchitis and pneumonia may occur. Hence I take the ground that not only is the application of cold dangerous, but unnecessary.

Also objectionable and harmful, in my opinion, is the frequent irrigation or wash-

ing of the conjunctival sac—every fifteen or thirty minutes. A well known axiom in surgery is *rest*, and the frequent manipulations of the parts necessary to carry out this proposition prevents rest, is of doubtful value, carries with it a modicum of danger from the possibility of removing a bit of the epithelial layer of the cornea, favoring ulceration—a condition to be avoided. The same may be said of the practice of separating the lids and with a bit of gauze or cotton wipe off the discharge. This danger is increased and made more easily possible by the maceration of the epithelial layer of the cornea by the discharge retained in the conjunctival sac on account of the agglutination of the lids, and herein lies a most important part of the treatment, in fact my *raison-d'être* for presenting this short paper.

Who, in treating cases of this kind, when the lids have been separated, has not seen the discharge to the extent of possibly a half teaspoonful or more flow out onto the cheek, due to retention from the sticking together of the lids? Not only is softening of the epithelial layer of the cornea favored by the retention of the secretion, but the pressure due thereto is also baneful and endangers the circulation of the cornea.

Prevention then of sticking together of the lids is one of the main, yes one of the most important parts of the treatment. It is simple and easily carried out by the nurse or mother. Simply besmearing the whole

external surface of the lids *including the edges* freely with any bland aseptic or mildly antiseptic ointment, and keeping them well covered with it constantly is the point. The discharge will then flow out onto the cheek and can be gently removed by rubbing with a bit of gauze, and more ointment applied immediately.

The usual daily application of silver nitrate one to two per cent. solution, or what is perhaps most frequently used now days a fifty per cent. solution of Argyrol, two or three times a day, to the everted lids or freely dropped into the conjunctival sac will fill the bill.

I have been surprised that this simple method of replacing the washing process has not been given the place it merits in the text books. I have followed it and taught it for years, and consider it one of the sheet anchors of success in these cases. A very gentle rotary massage of the upper lid will assist greatly in removing the discharge from the sac, and may be done just before the free application of the solution of Argyrol or protargol, if either of these painless solutions of silver are used. Solutions of nitrate of silver are best made to the everted lids. In whatever strength used it is painful, producing considerable irritation and much crying of the infant.

If haziness of the cornea or ulceration has occurred a one-half per cent. solution of atropine sulphate may be used in conjunction with the above treatment.

Treatment of a Xanthoma of the Lips—No

method of treatment gave satisfactory results until the author began the use of the high frequency spark, which gives good results, with slight pain and rapid effects. Most of the patients so far treated were also syphilitic. The author uses a static machine and a hyperstatic transformer, a large carbon electrode, a spark gap of two inches, and a contact spark of about an eighth of an inch. Two or three sittings are sufficient. —(C. W. Allen, *Medical Record*, September 23, 1905.

FREQUENCY OF ECTOPIC PREGNANCY.*

JAMES A. KING.

Manistee.

Several years ago I suggested to an old classmate that I would be pleased to receive any operative cases he might wish to refer.

The idea struck him *very* unfavorably but afforded him an opportunity to voice his opinion of what he called "Surgical fads." With him appendicitis was a "Fad." I shall always remember the self-assurance with which he said "I never saw a case." Bigotry, which masks so easily under the honorable cloak of conservatism, has always done more harm to humanity than radicalism in all things moral, political or economic, and medicine is no exception to the rule. This so-called conservatism of my old friend is a menace to public health in diverse ways. It is these conservative medical men that treat consumption with cod-liver oil, iodid of potash and whiskey and feel a comfortable satisfaction that all has been done that could have been done, when the funeral cortege of the patient wends its way to the cemetery. This kind of conservatism counsels delay and poultices for a felon, and breast milk for ophthalmia neonatorum. Its votaries do little surgery except fractures and dislocations; these they attempt with all the confidence with which they deny the possibility of gall-stones without jaundice. The votaries of this kind of conservatism scout the notion that ectopic pregnancy occurs any oftener than we were taught it did twenty-five years ago.

But there is a broader more numerous

and admirable, progressive class of earnest, conservative men, who believe ectopic gestation is very rare. It is unnatural to look very closely for that we do not expect to see, and therefore the frequency or infrequency of any pathological condition becomes a matter of great importance. It is my opinion that ectopic gestation is a common disaster; that it is important to emphasize its frequency, and that this has been inadequately done by authorities.

When we consider that some works on gynecology written fifteen years ago ignore the subject altogether, it is not strange that there is a wide spread belief that it seldom occurs. Skene in his treatise on Diseases of Women published in 1890 treats exhaustively of haematocele, but does not mention ectopic gestation except to refer it to the obstetrician. He gives a long list of causes for haematocele outside of tubal pregnancy. Diseases of Women by Thomas and Munde published in 1891. treats of haematocele and extra uterine pregnancy exhaustively in separate chapters; they do not apparently connect the two in causation but on the contrary, page 502 chapter on haematocele says: "As, however, the source of the hemorrhage which results in the bloody tumor very often cannot be ascertained, we are forced to deal with its most prominent and significant sign, taking this as an exponent of a state which is beyond the possibility of diagnosis." Clinical Gynecology, Keating and Coe, published in 1897, treats of ectopic pregnancy and haematocele under one head and, properly it seems to me, refers to haematocele, outside of tubal pregnancy, as a condition rarely demanding interference.

*Read before the section on Obstetrics and Gynecology at the annual meeting of the Michigan State Medical Society at Petoskey, June 30, 1905 and approved for publication by the Committee on Publication of the Council.

Kelly in his *Operative Gynecology* published in 1899 page 434 quotes A. Martin as having had seventy-seven cases coming under his personal observation, and says that he (Kelly) has seen twenty-three cases of extra uterine pregnancy in one thousand celiotomies. Now I have seen eleven cases in one hundred and twenty-five celiotomies, and all but one occurred since 1901. I have known of several more that have been operated on in my little town during this period. It does not seem reasonable to me that we have had an endemic of ectopic gestations, but that we recognize more of those we have had. The reason Howard Kelly saw but twenty-three cases in a thousand celiotomies previous to 1899 was because they were not recognized by the general practitioner and sent to him for operation. Doubtless he has seen more than twenty-three cases every year since that time. The lack of literature on the frequency of this abnormality naturally increases the liability of their being overlooked.

Recent statistics regarding the frequency of this accident seem to me very hard to obtain. Like most country doctors my reading is limited to what books I can buy from agents, but nothing on this subject has been offered to me. During the same period that I have seen ten of these eleven ectopic pregnancies, I have operated but twelve times for appendicitis in females exposed to pregnancy, i. e., I have operated almost as many times since 1901 for ectopic pregnancy as I have for appendicitis on females between puberty and the menopause. Of course almost every doctor now operates for appendicitis, while they are more apt to refer ectopic gestations, but it seems highly probable to me that the time will soon come when authorities will consider the exposed female, (between puberty and the menopause) about equally as liable to have tubal pregnancy as appendicitis. When we con-

sider the anatomical arrangement of the uterine appendages; the prevalence of gonorrhoea and miscarriage, with their consequent inflammations, and the number of opportunities for this accident to occur in the exposed female, covering such a long period of time, it does not seem to me that this view can be a very radical one.

The following six cases illustrate the liability of this condition to go unrecognized, having been sent to me by their medical attendant supposed to be suffering from some other disorder. The other five were recognized and operated on from a few hours to a day after rupture, and all recovered.

Case 1. Mrs. B. This patient had been treated with pessaries, douches, tampons, etc., for months. Prolonged sepsis had rendered her condition extremely critical. I operated as a forlorn hope, and found a large suppurating haematocle, with placental tissue at the bottom, still partly intact. The patient died of sepsis three days later.

Case 2. Mrs. P. Treated for two weeks for threatened miscarriage. At the end of that time her condition became very grave, and I was called and found her almost in a state of collapse. Operation disclosed a ruptured Fallopian tube containing placental villi. Recent adhesions showed that the hemorrhage had occurred in spurts at different periods, and the history indicated that the first rupture occurred two weeks before I operated. The patient recovered slowly on account of her very anemic condition.

Case 3. Mrs. H. Treated four weeks for threatened miscarriage. She expelled a foetus about ten days before I saw her. On operation I found a ruptured tube clear into the body of the uterus, and the hemorrhage was difficult to control. Whether this was a case of interstitial pregnancy, or a case of twin pregnancy, one uterine and one tubal,

I never knew. A large clot in the abdomen was already suppurating. Macroscopically villi were attached to the ruptured tube. The patient was septic at the time of the operation, and died a few days after.

Case 4. Mrs. A. Brought to me for operation for an undiagnosed pelvic disorder. The remains of an old haematocoele with ruptured tube, I found had been the cause of suppuration. The patient recovered.

Case 5. Mrs. C. Sent for to operate for appendicitis. I found the abdomen full of blood, both old and new clots, and the ruptured left tube slowly bleeding. The patient recovered.

Case 6. Mrs. H. Sent to me for some obscure ovarian trouble. I advised immediate operation for a ruptured tubal pregnancy. I found the abdomen full of partly organized blood clots, and a ruptured right Fallopian tube; also chronic catarrhal appendicitis. Death occurred on the eighth day from acute suppurative nephritis as revealed by post mortem.

Thus six of the cases operated on were unrecognized—yet the diagnosis of tubal pregnancy is not difficult if we had not been taught that ectopic gestation was so rare that we do not look for it.

In addition to these cases operated on I have seen several others I did not operate on. One, after a long period of sepsis, had rupture and discharge of sac and apparent foetal remains into the rectum, but I have excluded all these because the diagnosis was unconfirmed by operation or post mortem.

To my critics who deny that these cases operated on were cases of ectopic gestation, because no ovum was discovered, I wish to say that I have never yet lost time by searching among clots for a six-weeks or two-months foetus. In one case where the patient was almost moribund from hemorrhage, rupture occurring only a few hours

before operation, no blood whatever was removed, except that which spurted out through the incision. Both ovaries and tubes were ligated and removed, and the abdominal wound sutured all in seven minutes. The patient recovered. I think if I had prolonged the operation any she would have died on the table.

Deny that these cases are ectopic pregnancies if it pleases you. Call them haematocoeles or by any other name. It is a case of "The rose will smell as sweet," etc. I am satisfied that they were tubal pregnancies, but the important point is that these cases occur frequently not rarely, and require early recognition, and usually immediate surgical interference.

Since this paper was completed I have learned that a case recently referred to me by Dr. Ramsdell in which we both made a diagnosis of probable tubal pregnancy, has been operated on in Ann Arbor, and the husband reports that it was a case of "Extra uterine pregnancy."

The Treatment of Eczema and Impetigo in Children.—C. W. Allen says that although many cases of infantile eczema depend on improper feeding, and faulty digestion or assimilation, the majority are susceptible of cure by local measures alone. In general it may be said that symmetry of lesion speaks for constitutional origin, asymmetry for local cause. Among general local measures to fulfill the objects of disinfection, protection, soothing and favoring the growth of new epidermis, the use of methylene blue solution is especially advocated. A three to five per cent. watery solution is allowed to dry in well and a thin layer of collodion is quickly applied. Nitrate of silver in five to twenty per cent. strength, salicylic acid, resorcin, sulphur, ichthyol, etc., are also recommended and the indications for their use in different cases described. Impetigo contagiosa according to the author is frequently associated with pediculosis capitis and in treating it the parasites should be sought for. Crusts are to be removed with potato flour poultices and ten per cent. ammoniated mercury ointment applied, or green soap solution followed by 1-1,000 bichloride of mercury. Ichthyol, salol, beta naphthol, sulphur and red sulphide of mercury are also useful in some cases.—(*Medical Record*, May 20, 1905.)

THROMBOSIS OF ANTERIOR TIBIAL ARTERY IN GUN SHOT WOUND.*

L. W. GARDNER,
Harbor Springs.

On Sunday morning, February 5th, 1905, in the midst of a fearful blizzard which had lasted for a week blockading the roads to almost an impassable condition, I received a hurried message, sent by telephone from the nearest station some six miles away that a lady had been accidentally shot and was bleeding to death, to come quick.

I hurriedly prepared my grip with what I thought I would need, viz: surgical instruments for minor surgical work, anaesthetic bandages, etc., and with my buggy case containing some 54 remedies, donned my heavy fur coat and fur robes, ordered my horse and started in the direction of the call which was 16 miles distant.

The call came at 10.00 o'clock a. m., the accident occurred some two hours before, the messenger being on the road two hours before he could reach me by 'phone. I drove my horse as best I could, but made slow progress as the roads were filled full of heavy snow drifts. I, however, reached my destination at about 2.30 p. m. and found the situation as follows:

A lumber camp where a half-dozen men were employed getting out cedar timber living with a family of five persons: father, mother, two daughters and grandmother, the latter a lady of 62 years of age, of stout build, weighing probably 190 pounds, the victim of the tragedy. Among the hired help was a young man about 17 years of age, who after breakfast that morning had

taken down his shot gun from where it was kept, had cleaned, oiled and was loading it with shells when it was accidentally discharged, the muzzle of the gun pointing downward and across from where he was sitting and in exact range to where the grandmother was standing helping about the morning work. The gun was fired at close range, probably not more than six feet away, the charge taking effect on the lateral or external surface of right limb just above the ankle joint, cutting away both tibia and fibula, the tendons and muscular tissue, leaving the foot attached only by small pieces of skins, the blood vessels being severed, the wound had bled profusely and continued to ooze until I arrived some six and one-half hours after the accident.

On arriving I found the woman lying on the floor with blankets under and over her freely saturated with blood, a large pool of blood which had ran across the floor and under the bed. The woman was faint and still suffering from the shock. I at once examined the injury as to its nature and extent. I soon found I was not prepared to do what was necessary for her there, furthermore, the patient had not sufficiently recovered from the shock to justify an amputation at that time, so after making my patient as comfortable as possible by putting the limb into a temporary dressing, I commenced preparation for her removal to the nearest hospital, 28 miles distant.

I found it impossible to leave camp with the patient before morning, as darkness and night had overtaken us, with a fierce storm still raging outside, but as the grew dawn of early morning lit up the dense wood, we were on our way to Pellston, the nearest

* Read before the Section on Surgery, Ophthalmology and Otology at the annual meeting of the Michigan State Medical Society at Petoskey, June 28, 1905, and approved for publication by the Committee on Publication of the Council.

railway station, awaiting the first train to Petoskey.

On arriving at Petoskey, thence to the hospital, we called up Drs. Calkins and Oven to see the case and also to assist in the operation which was at once performed, i. e., an amputation of the limb just above the ankle joint. The patient had stood the journey remarkably and was in a much better condition physically than the night before.

The hands of the operator and assistant were thoroughly cleaned and rendered aseptic, all instruments boiled and ligatures and dressings freely sterilized, the wound was carefully and strenuously treated antiseptically before closing the flaps. In ligating the vessels, the posterior tibial and peroneal arteries were taken up first, these vessels bled quite freely, contained the normal elasticity of the artery, but in taking up the anterior tibial artery, it was found empty and collapsed. We removed our compression on the vessel, but the blood refused to start, and mention was made of this at the time, as it seemed strange to us and something I had never witnessed before, for an artery not to bleed when incised and the end of the vessel in plain sight, but nothing was done other than to ligate the vessel, sponge off the surface of the wound and bring the flaps in apposition, insert a drainage tube in outer angle to the flap and introduce our sutures.

All seemed to go well for the first 48 hours, when up came the temperature 102 degrees, then 104 degrees Fahrenheit and still advancing, swelling and discoloration of the whole anterior flap with a deep red line extending from over the ligated end of the anterior tibial artery upwards above the knee and half way up the thigh, the tissues were oedematous and extremely sensitive to the touch, patient complained of much pain in the limb and did not rest well. Up

to this time were using a dry dressing, but now it was thought best to treat the wound with a moist dressing. Some of the stitches were removed to allow better drainage and irrigation was resorted to. This was kept up, changing the dressing twice in 24 hours. In this treatment we used a solution of Pottossa Pormanginus Lysol, a dry powder of Aristol. After the 4th day the patient's temperature began to drop and stood at 100 degrees, where it remained for several days. The pain became less, appetite increased and the patient looked better. On the 7th day, the stitches were all removed, the line of demarkation had become fully established, the deep red line commencing from the internal surface of the anterior flap and extending to the medium line of the limb, thence along the course of the anterior tibial artery until it became less distinct, upwards towards the thigh.

On the tenth day, the slough had loosened up sufficiently to be nearly all removed, thus giving free excess to drainage and thorough cleansing.

From this time on the wound was treated openly. In the meantime, an abscess had formed on the internal and posterior surface of the thigh requiring free incision at two points above the knee, this was done promptly packed with sterilized gauze at each changing of the dressings of the wound. The wound had suffered considerable loss of tissue by slough, to that extent that the ends of the tibia and fibula was in sight, and it was thought they would need excision to insure sufficient covering, but in a very few days, granulation had completely covered the ends of the bones and had filled the contracted area perfectly.

From this time on the patient steadily improved until she was able to go to her home in Saginaw, Michigan.

Now, gentlemen, the point which I would like to ask is this: Do these symptoms cor-

firm "Thrombosis Hemorrhagic," due to concussion as by gun shot wound, or have we stronger reasons to believe there might have been sepsis in the case as the cause for the disturbance?

I have made this simple statement of the case more especially for the purpose of inviting your thoughts to a few minutes of discussion upon the subject other than to extend my article farther at this time. However, I desire you to note the following conditions which were present, that lead us to

make our diagnosis, namely: "Thrombosis of anterior tibial artery." First, the relaxed and collapsed appearance of the end of the artery, the anterior tibial which was in sight after amputation. Second, its failure to bleed upon removed of Esmarch. Third the line of slough which followed the course of the vessel. Fourth, the slough occurring in the anterior flap which contained the anterior tibial artery, while the posterior flap contained the posterior tibial artery, remained perfectly healthy and free from slough throughout the treatment of the case.

DISPENSING BY PHYSICIANS.*

H. B. GARNER,
Traverse City.

This is an important subject and one that should require the careful consideration of every practicing physician. The physicians who dispense their own medicines are simply turning the wheel of progress backward. Originally pharmacy and medicine were combined in the same profession and were practiced by the same men. With the development of knowledge and the inevitable specialization of all occupations a class of trained men known as pharmacists sprung from the parent profession of medicine as it was practiced in the middle ages. For physicians to return to the old conditions of things is to disregard science, reject progress, and tread history under foot.

Fortunately the better element in medicine realize thoroughly that the physician is not and cannot be a trained pharmacist; that he has received virtually no instruction

in pharmacy in his medical course; that he is entirely without practical dispensing experience; that he is incapable of performing the duties of a pharmacist with skill and safety; and that he should relinquish a practice which is at once dangerous and unethical.

Reasons why a physician is not competent to dispense drugs are these:

First—He is a physician and not a pharmacist.

Second—He is not a merchant or vender of material things.

Third—His time with a patient must, if it results in the greatest good of the patient, be devoted to the diagnosis and treatment of his case.

Fourth—The country is loaded with an inferior class of goods and he is apt to employ cheap remedies in preference to the better quality of pharmaceutical preparations.

Fifth—He cannot devote a proper amount of time to the preparations of active and reliable drugs and do a general practice successfully.

* Read before the Section on General Medicine at the annual meeting of the Michigan State Medical Society at Petoskey, June 29, 1905, and approved for publication by the Committee on Publication of the Council.

Sixth—His drugs must of necessity deteriorate.

Seventh—He falls into a routine way of prescribing pills, the formulae of which were studied with some one else's brains, and many times too often do not fill the bill.

In order to consider these reasons more specifically let us take them up in their order.

The first is self evident and requires no explanation. The second is likewise self evident. Many physicians dispense medicines claiming thus to make money. In other words, they become venders of drugs, not druggists nor pharmacists, but peddlers. The representatives of cheap pharmaceutical manufactures argue that dispensing is a money-maker and press hard the idea that physicians are getting their drugs cheap, and argue hard from the standpoint of convenience the sale of pills or tablets. However, they are very careful not to say anything about quality or accurate dosage.

The third reason, namely the lack of time, is likewise self evident. The time taken in the treatment of a careful physician for the preparation of drugs is stolen from that patient and he must be the loser.

Fourth, the physician who dispenses his own drugs usually uses cheap remedies, because this is one of his chief ends of making this branch of his business lucrative. He is often guilty of dispensing drugs which he knows are not the best remedies for the case, but are used because he happens to have them in stock and are not the drugs that experience and knowledge have taught him are the best for the case.

Fifth, no physician who compounds his own prescriptions devotes the time necessary to the scientific completion of that work, but employs ways and means of doing the work with the least amount of labor and in the shortest space of time.

Seventh, when any man allows any one

else not equally informed to furnish brains for his practice to unnecessary and perhaps hazardous risks he is himself, sooner or later, the loser.

On the other hand, it is equally important to bring up objections urged against prescription writing.

First—Druggists substitute.

Second—Druggists secure the business that rightly belongs to the physician by counter-prescribing.

Third—Patients pay the physician for the prescription, and having it filled once at the drug store have it refilled any number of times without the physician's knowledge or advise.

The pernicious practice of substitution may be largely overcome by the prescription writer directing his patients to a druggist whom he knows to be honest and fair in his dealings.

Second counter-prescribing is a great evil and a dangerous custom for druggists to fall into. Thousands of people are constantly buying preparations, prescribed by druggists, which contain alcohol, morphine, cocaine and allied drugs, which result in the contraction of habits to the wrecking of thousands of individuals. The apothecary shop of former days is not now known. The need of the medical profession is a strict apothecary shop where pure drugs are sold, where physicians' prescriptions are promptly and accurately compounded, where the good of the individual is uppermost in the mind and not in the pocketbook. In France auto-dispensing is prohibited by law, and I believe like laws in our own country are much needed and would be a protection and a blessing to the laity.

Gentlemen, remember that Dr. Hare tells us that a good physician is one who, having pure drugs knows when to use them, how to use them, and equally important when not to use them. On the other hand, would

say that a good druggist is one who, having pure drugs, knows when to compound them, how to compound them, and equally important when not to compound them.

Third—The reason raised by the physician who dispenses his own medicine, namely, refilling prescriptions without the advice of the physician, is one which can readily be settled by the physician and the druggist having a mutual understanding relative to the matter.

Prescription writing is popular in those localities where the large number of physicians are the most progressive. I do not mean to say that only progressive physicians write prescriptions, because this is far from

the truth. The country practitioner is fully as scientific and equally as successful as the city physician. He is obliged in many cases to dispense his own medicines, or, in other words, to be his own druggist, not as a matter of choice, in the vast majority of cases, but as a matter of necessity.

Is the dispensing physician the progressive, educated, sympathetic physician whose chief aim is to do good, and who would like to see two or three pharmacists make a living by catering to the interests of himself and his patients? Or is he the selfish, uneducated, unsympathetic man who "wants it all," and who cares not for his fellow man?

The Treatment of Acne.—C. M. Williams first reviews the evidence in favor of the various theories of the etiology of acne, and expresses himself as believing that the view which embraces both the bacterial and the constitutional factors is the true one. He says that acceptance of the belief that the microbacillus is the active, essential pathogenic agent in the production of the lesions does not involve the denial of the equally great importance of the constitutional state. Accordingly the treatment must be both local and general, and the necessity for thoroughness in the search for and correction of all possible predisposing causes, and for minute detail in all efforts at treatment, is particularly emphasized. Of the predisposing causes indigestion with constipation, disease of the sexual organs, the scrofulous type, and anemia are mentioned as especially important and their treatment when complicated by acne is outlined. The local measures are, however, the most important, and the hygiene of the skin is described in detail. Of topical applications, after the irritated skin has been soothed by the use of bland lotions like milk of magnesia diluted, stronger preparations of which the basis is usually sulphur and of which *lotio alba* is a useful example, are to be employed. The treatment also includes the expression of comedos, incision of indurated or sluggish nodules, etc., and the minutiae of these various phases are fully described. The author urges the adoption of a single drug as a main re-

liance and study of its possibilities, rather than shifting from one thing to another in the hope of finding a panacea, which does not exist. As the morococcus, which is responsible apparently for most of the inflammation and suppuration in acne, is exceedingly common if not universal in dermatitis seborrhoica, treatment of the scalp should go hand in hand with the other measures.—*Medical Record*, July 22, 1905.

Serum Therapy in Erysipelas; Results in Thirty-Three Additional Cases.—James C. Ayer, who some time ago published his observations on a series of fifteen cases of erysipelas treated by antistreptococcus serum, reports the results obtained by the same treatment in thirty-three additional cases. Three of the patients died in this last series, the average duration of the disease was 6.8 days, as against 7.6 days in the previous series. In the first series of 79 cases treated by the older methods, the average duration was 9.4 days. The author says that this shortening of the average duration of the disease by 2.6 days about expresses the value of this form of treatment. The general amelioration of all the subjective symptoms following its employment is also in its favor, as is the apparent beneficial effect on the febrile form of albuminuria, which is present in such a considerable percentage of the cases.—(*Medical Record*, August 26, 1905.)

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Editorial.

WHAT CLASS OF PRESCRIPTIONS ARE PHYSICIANS WRITING?

(As shown by an examination of 7,500 Rs from 15 different localities.)

A paper read last year at the Ohio Pharmaceutical Association by Mr. Kaemerer pertaining to the classes of medicine ordered by physicians as disclosed by 500 consecutive Rs. from his files, came to my notice late in the year. Incidentally turning to my own files and looking over 100, I found such a variation from his report that it occurred to me to get reports from various part of the state for presentation here.

The pharmacist was asked to separate the last 500 Rs. on his files into five classes as follows:

Class 1. Rs. consisting mainly of a proprietary medicine.

Class II. Rs. calling for ready made pills or tablets.

Class III. Rs. calling for single pharmaceutical.

Class IV. Rs. calling for two or more pharmaceuticals, but requiring no greater skill than simple weighing or measuring.

Class V. Rs. other than the above and calling for a greater or less degree of skill in compounding.

Here are the results in percentages:

	I	II	III	IV	V
No. 1 Gd. Rapids..15	14.4	17.6	35.4	17.6	
No. 2 Cadillac.....22.8	6.8	26.4	42.6	1.4	
No. 3 Unionville...12	4	7	36	41	
No. 4 Detroit.....10	10.2	14.2	14.6	51	
No. 5 Owosso.....21	14	21	33	11	
No. 6 Ann Arbor.. 9	6	36	44	5	
No. 7 Detroit.....26.4	4.8	10.8	33.6	24.2	
No. 8 Detroit.....21.6	6	12.4	12.6	46.4	
No. 9 Detroit.....22.6	7	28.8	27	14.6	
No. 10 Detroit.....19.8	10.4	9.6	34	26.2	
No. 11 Detroit..... 3.8	10.4	14.2	17.2	54.4	
No. 12 Ste. Claire..11	14	14	50	11	
No. 13 Detroit.....22	8.6	20.2	27.8	21.4	
No. 14 Detroit.....24.2	8.8	9.2	35.8	22	
No. 15 Marquette...36	11	20	30	3	
Average Outside De- troit and Grand					
Rapids13.2	9.3	20.7	39.3	12.1	
Average Detroit and					
Grand Rapids....18.4	9	15.2	26.4	30.9	
Total average.....16.3	9.1	17.4	31.6	23.2	
Columbus (Kae- marer)25	8	15	32	20	

No. 11 said articles like Thymoseptine, Glycethymoline, Borolyptol and Haemotonic estimated at 10 per cent, he did not include in Class 1. If included in Class 1 it would make 13.88 per cent and deduct from Class III and IV.

No. 4 included those items in Class 1; without them the percentage was 5.6 per cent.

No. 10 includes Rs. of Hydrochloric acid with Elix Lactopeptine in Class 1.

No. 12 said a large proportion (50 per cent) of his Rs. are from one physician.

No. 11 includes in Class V Capsules, powders, Collyria, Suppositions, etc., also all mixtures containing poisonous drugs.

No. 1 includes in Class IV all simple ointments and powders as well as liquid, nothing however except what an inexperienced person could handle with slight instructions.

In 1895 an investigation conducted by Prof. Patch for the Amer. Pharm. Assoc. and covering 31,000 Rs. showed of proprietaries:

	Per cent.
Chicago	14.9
San Francisco	13
Philadelphia	4.78
St. Louis	14
St. Louis	11.8
Boston	12.5
Washington	5.25
Total average	11.25

Hilton (Washington) of 2,000 Rs. classified, 742 Mixtures, 124 Pills, 15 Plasters, 376 Powders, 50 Ointments, 17 Suppositories, 304 Capsules, 27 Tablets, 19 Comp. Tab., and 105 Proprietary.

No. 4, Detroit (Hall) examined also 100 Rs in Oct. 1904 and 100 Rs Jan. 1905.

Comparison.	I Per cent.	II Per cent.	III Per cent.	IV Per cent.	V Per cent.
Oct. 1904 (100Rs) ..	6	8	15	17	54
Jan. 1905 (100Rs) ..	6	6	17	24	47
July 1905 (500Rs) ..	10	10.2	14.2	14.6	51

He put into Class V Rs. calling for single pharmaceuticals but requiring technical skill in division, such as Ung. Hydrarg, divided in portions dispensed in oiled paper and division into Capsules or powders or others. Further divided Class V (No. 4 report) showed in per cent. as follows:

	Oct., 1904.	Jan., 1905.	July, 1905.
Suppositories0	1	.4
Pills	3	0	.8
Powders	4	5	4
Collyria	6	3	4.8
Emulsions	1	0	.4
Plasters	0	0	0
Capsules and Konseals....	18	12	12.6
Mixtures	17	19	19.6
Ointments	4	6	8
Impressions	1	1	.4

No. 11 further divided Class V expressed in percentage as follows: July 1905.

	Per cent.
Suppositions	0.
Pills8
Powders	5.2
Collyria	10.6
Emulsions	0.

Capsules and Konseals.....	9.8
Mixtures	22.8
Ointments	5.6
Infusions	0.
Plasters6
	55.4

The percentage of proprietaries seems to be more than the 1895 analysis by 4 per cent. Detroit and Grand Rapids combined have a little larger percentage than the smaller places owing probably to the physicians being visited oftener by representatives of proprietary or pharmaceutical houses. The increased percentage of Class V in the city is what might be expected as more specialists are in the larger places and a much greater variety of Rs. from other cities are met with.

A further investigation along these lines another year with more time, a broader field, limitations more exactly defined and if possible a tabulation of the articles prescribed and frequently will add a good deal to this interesting subject.

WM. A. HALL.

THE NEW U. S. PHARMACOPEIA.

A new Pharmacoporia to be known as the Eight Decennial Revision according to the Committee of Revision for the name that it was not, nor were its predecessors for that matter, published exactly at the beginning of the decade, and hence should not be described by its first year, became official September 1, 1905. Since it is in this state, as in many others, adopted by law as the standard for drugs used for medicinal purposes, and is therefore used, necessarily, by the pharmacists in putting up our prescriptions, it is incumbent upon us all to this work.

Following along the lines of the International Conference held in Brussels in 1902, some important changes have re-

to die from circulatory troubles—since no examiner can always tell the exact condition of the “pumps, valves and pipes,” even though he has acquired great skill from long experience. We know that hundreds die directly as a result of myocardial changes, yet no physician can diagnose changes except those producing marked hypertrophy, dilatation, or advanced fatty degeneration. Hundreds of patients destined soon to die from fibroid changes from weak muscular walls, and from fatty changes are passed as “first class.” Among so many “first class risks” there are many that the examiner should find bad if he would observe a little more closely the signs of trouble ahead that nature often reveals. These signs are found in the heart muscles, the heart cavities, and the blood vessels; so the examiner, in looking over an applicant’s circulation, should ask himself the following questions: What is the condition of the heart muscle; of the heart cavities; of the blood vessels?

Dr. Ellis mentions the following as some of the common mistakes:

1. Excited, nervous heart, beating against thin chest walls; diagnosed as hypertrophy.

2. Loud systolic murmur, widely diffused over left chest and behind, and disappearing with the anemic conditions; diagnosed as mitral regurgitation.

3. A loud mitral systolic murmur clearly heard six months after typhoid fever, miscalled organic mitral regurgitation. In three months such a heart may regain its muscular strength, the dilated mitral orifice may contract to its normal size, and the leak prove to be only relative.

4. Flint’s aortic regurgitation heard at the apex; miscalled mitral stenosis, though the peripheral signs show the true lesion.

5. Forgetting to hunt for aortic murmurs at the third and fourth left and second right interspace because the sounds at the apex are clear.

6. Diagnosing a cardiorespiratory murmur heard about the apex, in the axilla, and behind as mitral regurgitation.

7. A condition where the apex beat is two inches to left of nipple line, a heaving heart, a clear first sound, an intensified second, with tense arteries, miscalled a normal heart.

8. An aortic murmur, diagnosed as true aortic stenosis, when there is a strong aortic second sound, no cardiac thrill, and no low plateau pulse. It is well to remember that there are ten possible causes for an aortic systolic murmur, one of which is aortic stenosis.

9. The greatest mistake of all and often the real cause of most mistakes: Listening to a heart through the clothing, from a thick shirt to shirt, waistcoat, and coat.

The following general points are made:

1. A musical ear is of great value in heart examinations.

2. Most murmurs are functional or cardiorespiratory. Advanced heart lesions may show no hypertrophy, no dilation, but merely a diseased valve with signs of heart muscle degeneration.

3. Cardiorespiratory murmurs disappear after a full expiration. Relative murmurs from hearts weak after acute disease disappear when the heart muscle recovers its normal tone.

4. Limit all murmurs to one diseased valve, if possible, since post mortem examinations usually show one diseased valve with a relative leakage at another valve.

5. An aortic regurgitation may produce four murmurs with but one diseased valve.

6. Each murmur must have its own

maximum intensity and its own area of diffusion.

7. An organic murmur is not always attended by the expected changes in the heart, in the pulmonary and peripheral circulation.

8. The pulmonary second sound is usually greater than the aortic second until thirty years of age; about the same until sixty years and less than aortic second after sixty years.

9. Know well the classical pulmonary, peripheral, and cardiac lesions and see how many of these signs are partially noted in each special case.

10. A long, loud murmur may indicate a strong heart with little valve change, while a short, blowing murmur may indicate a weak heart with great valve change.

11. Hypertrophy may be caused by over exercise, by pulmonary or peripheral circulation resistance, as well as by valve lesion.

12. A bad heart does not necessarily mean a valvular lesion any more than valvular lesion means a bad heart.

13. A pulse that intermits occasionally may be considered physiological, but an irregular, intermittent pulse is almost always pathological.

14. First study the heart as a pump muscle, then study the valves, then the vessels; and last the non-organic murmurs.

County Society News.

MANISTEE COUNTY.

Albert S. Payne, of Manistee, reported the following case of tetanus, treated with intraspinal injection of anti tetanus serum:

On June 23d, 1905, E. P. was shot in palm of left hand with a blank metallic cartridge. Said he removed wad from wound after injury.

Nine days later on July 2nd, bad backache between shoulders.

July 3d and 4th same; felt tired but was up and around.

Jaws began to hurt on 4th and 5th, felt stiff.

I saw him first on 6th. Could only open jaws about three-quarters inch and left hand was flexed at a right angle; could not extend wrist if fingers were extended but could if they were closed. Wound had dark necrosed centre with pale edges, no redness or swelling. Dorsal and abdominal muscles rigid. Temperature 100 degrees, pulse 120; appeared scared. Could not turn over in bed or sit up without help and moving caused great pain and increased the muscular spasm. Curretted out wound which was one-third inch deep and cleansed with ninety-five per cent. carbolic acid. I injected 20 c.c. tetanus antitoxine into dorsal muscles. July 7th, temperature, ninety-nine and four-fifths, pulse one hundred, some difficulty in swallowing. Abdominal and dorsal muscles in tonic spasm. Pressure increases spasm and causes great pain.

July 9th, temperature, ninety-nine and one-half, pulse 100; sleeps scarcely any. Gave intraspinal injection of 10 c.c. of antitetanus serum (after the method of Dr. J. Rogers, in the Journal of the American Medical Association of July 1, '05) trying to enter the cord by moving the needle back and forth after passing through the subarachnoid space. Also gave hypodermic injections of 1 c.c. of a two per cent. solution of carbolic acid every three hours and kept this up until July 17th.

Could only open mouth about one-third inch. Throwing back the bed clothing caused arching of back from spasms. July 10, left wrist could only be extended by using force and causes great pain. Urinated and bowels moved freely; slept one and one-quarter hours in twenty-four.

July 11, intraspinal injection, 10 c.c. antitoxine. General tonic spasm, five rashes over body; tongue very sore; jaws closed so could not get thermometer in mouth; seems worse in every way. July 13th, temperature ninety-nine and two-fifths degrees; pulse 112. Has not slept three hours in four days. Added one-eighth grain of Morph. Sulph to each hypodermic of the carbolic acid solution and gave gr. x. of potass brom. every hour.

Gave intraspinal injection of 10 c.c. antitoxine, severe popular rash all over the body. Takes liquid nourishment but finds it hard to swallow.

July 14, intraspinal injection of 10 c.c. antitoxine. Does not suffer as much as yesterday and appears better; wound on hand healed; rash nearly gone, except on back. Pulse 112; tem-

perature ninety-nine and one-half degrees; abdominal and dorsal muscles still in tonic spasm. Hand not quite so rigid and I can partly straighten it with force.

July 16, appeared much better, eats and sleeps well. July 21, continued improvement; mouth opens three-quarter inch, but dorsal and abdominal muscles contract if they are manipulated; wrist still flexed. Temperature ninety-nine and one-half; pulse one hundred. July 31, can walk around room and nearly straighten wrist but abdominal muscles show some rigidity and he has severe pain in right upper gluteal region, but this gradually disappeared and on Aug. 20th, he was reported to me to be as well as usual although I have not seen him since July 31st.

W. K. BRANCH, Sec'y.

Medical News.

General Isaac J. Wistar, of Philadelphia, founder of the Wistar Institute of Anatomy and Biology of the University of Pennsylvania, formerly president of the American Philosophical Society, died September 18, at the age of seventy-eight years.

General Wistar left \$400,000 to the Wistar Institute of Anatomy and Biology of the University of Pennsylvania.

The Emperor of Austria has conferred a life patent of nobility on Dr. Edmund Neusser, Professor of Medicine in University of Vienna.

Leprosy is said to be increasing in Roumania. Till 1895 no special precautions were taken, the disease not being considered contagious. Since then, however, so many cases have been discovered that the authorities became alarmed and the rebuilding of an ancient monastery at Arnota on the seashore for the interment of lepers was resolved on.

Col. W. C. Gorgas, chief sanitary officer of the Isthmus Canal Zone, has officially reported the death of an authentic case of bubonic plague. All who have been in contact with the case have been strictly quarantined and the entire village disinfected.

The Peary Arctic Expedition has gone without a surgeon. The medical man who had been engaged for the expedition was unable at the last moment to go.

A recent number of the *Revue des Deux*

Mondes contains an article by Professor Lortet F. Lyons, in which recent discoveries in respect to embalming in ancient Egypt are described. More than seventy yards of cloth of a width of about 12 inches were used in wrapping a mummy. The cloth was impregnated with a resinous alkaline solution, to what Professor Lortet attributes the preservation of the tissues. Ten large jars, carefully stoppered, full of a yellowish powder, have been found in a tomb near Thebes. On analysis, the powder was found to contain an aromatic resinous substance and a large proportion of sodium salts, with some sand and clay. The resinous substance is evidently an extract of various aromatic substances in which myrrh predominates. Cloth dipped in water in which some of this powder was dissolved presents the same appearance and odor as the cloth in which mummies were wrapped.

American surgeons at Manila are said to have attained remarkable success in the cure of leprosy by means of the X-Ray.

The first number of the "State Board Journal of America" made its appearance September, 1905. It is a monthly periodical devoted to the mutual interests of boards, students and colleges of medicine, dentistry and pharmacology. It is published in Washington, D. C.

More than one million people emigrated to the United States during the year ending June 1st—In 1842, the number was one hundred thousand. During the past eighty-six years the total number of emigrants to this country has been 22,932,905.

The Hot Springs medical profession has been somewhat upset over the recent decision of the Arkansas chancellor to the effect that the act of the state legislature restricting "doctor drumming" was unconstitutional. Along this line it is reported that the United States government has sent a special inspector to investigate the conditions of medical practice there and also of the wholesale gambling. It is rumored that in order to rehabilitate Hot Springs the government will put certain restrictions and regulations upon the use of baths so as to purify the general morals of the popular resort.

Plans are maturing for the engagement of a chartered steamship from New York at a reasonable rate and to include not only passage to the congress at Lisbon, but also a European itinerary. Dr. Charles Ward Fassett, of St. Joseph, is engineering the arrangement.

American physicians and dentists find it impossible to practice their professions in the Transvaal without first obtaining a certificate of registration and such certificates cannot be obtained unless the applicant possesses British qualifications.

After five years of very creditable work Dr. Emil Amberg of Detroit retires at his own request as The Michigan Member of the National Legislative Council of The American Medical Association. The Society will lose the services of a hard, conscientious, fearless worker in a delicate field; but is fortunate in securing as his successor one who by education and personal traits will fill the chair with the same fearlessness, tact and good judgment, Dr. Flemming Carrow.

Miscellaneous.

CHANGE IN MEMBERSHIP.

(July 15th to Sept. 15th.)

NEW MEMBERS.

J. C. Abrams, Calumet, Mich.
E. H. Campbell, Newberry, Mich.
W. H. Dodge, Hancock, Mich.
Emil Houle, Kearsarge, Mich.
H. F. Hughes, Cambria, Mich.
H. M. Joy, Calumet, Mich.
F. H. Newberry, Cass City, Mich.
S. C. Norton, Baltic Mine, Mich.
F. E. Rutledge, Newberry, Mich.
J. J. Sweetland, Motville, Mich.
P. Talford, Pittsford, Mich.
J. W. Toan, Grand Rapids, Mich.
A. N. Treadgold, Cass City, Mich.
J. M. Wilkinson, St. James, Mich.

CHANGE OF ADDRESS.

S. E. Campbell, Kearsarge, Mich.
F. J. Fralick, Greenville, Mich.
E. B. Gibson, Ypsilanti, Mich.
J. Gillett, Wixom, Mich.
C. E. Keeler, Erie, Pa.
A. C. MacKinnon, Lewiston, Mich.
M. R. Sutton, Clayton, Mich.
F. L. Truitt, Noblesville, Ind.
W. B. Wallace, Cadillac, Mich.

BOOKS RECEIVED.

A PRACTICAL TREATISE ON SEXUAL DISORDERS IN THE MALE AND FEMALE. By Robert W. Taylor, A.M., M.D. Third Edition. Lea Brothers & Co., Philadelphia and New York, 1905.

A READY REFERENCE HAND-BOOK ON DISEASES OF THE SKIN. By George T. Jackson, M.D. Fifth edition. Lea Brothers & Co., Philadelphia and New York, 1905.

A TEXT-BOOK OF CLINICAL DIAGNOSIS. By L. N. Boston, A.M., M.D. Second edition. W. B. Saunders & Co., Philadelphia and London, 1905.

A TEXT-BOOK OF DISEASES OF WOMEN. By Barton C. Hirst, M.D. Second edition. W. B. Saunders & Co., Philadelphia and London, 1905.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D. Seventh edition. W. B. Saunders & Co., Philadelphia and London, 1905.

THERAPEUTICS: ITS PRINCIPLES AND PRACTICE. By Horatio C. Wood, M.D., LL.D. Twelfth edition. J. B. Lippincott Co., Philadelphia and London, 1905.

ADVANCED SHEETS. A Manual and Atlas of Orthopedic Surgery. By James K. Young, M.D., 900 pages, 800 illustrations. Cloth \$10. P. Blakeston's Son & Co., Philadelphia, 1905.

Correspondence.

Secretary:

At the British Medical Association which met this year at Leicester, two notable addresses were given, one by the president Mr. George Cooper Franklin, F.R.C.S. and the other by Henry Maudsley, M.D., F.R.C.S.

The first on the "Methods of Education in our Medical Schools and Colleges", and the second on "Medicine, Present and Prospective." Mr. Cooper remarked that in many instances the preliminary examinations are lamentably slack and ineffective. He suggests that every medical student should be required to pass an examination equal in stringency to the matriculation examination of the University of London. He regrets that the student has been allowed the alternative of taking up the study of German instead of Greek. With regard to the education in obstetric medicine and surgery the speaker did not think that its importance was appreciated as it should be, as he considered it only trifling with the subject for it to be deemed sufficient that a man should have attended not less than twenty cases in order to be recommended. While there has been a vast improvement in the teaching of the administration of anaesthetics compared with former years, he thought that its importance was still underestimated, as the administration of an anaesthetic may devolve upon any practitioner at any moment.

Dr. Maudsley, who is recognized as a philosopher as well as a physician and scholar, delivered a masterly address which is considered a valuable contribution to modern medical thought.

He takes the old truism "Prevention is better than cure" boldly in his hands and shows by comparison how simple are the laws which govern the one and how complex and almost incomprehensible are the laws which govern the other. Pure air, pure water, fitting food, exercise and temperance are his watchwords. In the passages in which he deals with the chemistry of the human body, he does not pretend to expound original ideas, but presents the facts with a beautiful lucidity and eloquence. The normal man throws off toxic agents which are created within him by the natural processes of the body and when those natural processes are arrested or disturbed, the exact nature of the chemical changes are hard to understand and it is just as difficult to know what chemical reagent to administer.

Chemistry of Emotion.

Of profound interest is that part of Dr. Maudsley's address where he makes a determined onslaught upon those who make an arbitrary differentiation between the mind and body as if there was a chasm between—and as if they did not unite in every physical and spiritual fiber to make one personality; a lunatic being a lunatic to the tips of his fingers. None the less interesting was he when he inveighed against the present practice of inventing and multiplying words of Greek or Latin or mixed roots to describe simple things.

Two questions of vast importance have been under consideration by the officials of the British Isles, viz.: the deterioration of the inhabitants of the Isles and the increase of insanity.

Dr. Maurice, recruiting officer of the British army, reported that three out of every five of the young men who presented themselves for examination for the British army were rejected being physically unable to reach the standard requisite. And quite a percentage of those who did pass were incapacitated during the first six months or before the end of two years service. The General in his analysis for physical breakdown gives heart weakness, pulmonary troubles, rheumatism connected with a low anaemic condition of the whole body. Then follows flat feet which tend to make long marching impossible, and bad teeth causing indigestion. In discussing the causes

of the above diseases he attributed bad teeth to improper feeding during childhood and infancy, due to ignorance of mothers and scarcity of milk, and too early marriages of unfit parents resulting in weakly offspring.

He points also to the continuous rush of people from the rural districts to the cities and failure to earn adequate wages after they get there, because only skilled labor demands good pay, and he presumes that neither the unskilled labor nor the hereditary townsman who after two or three generations has physically deteriorated, is able to rear a healthy family. After being discussed by the English press the question was taken up by the House of Commons, and the Lord Privy Counsel appointed a commissioner of experts to secure evidence in different parts of the British Isles after consulting with the Royal College of Physicians and Surgeons as to the necessity as well as the best method and extent of examination.

The report of commission was very exhaustive and voluminous containing fifty-four recommendations and was submitted to Parliament. Testimony being taken and investigations made throughout England, Wales, Scotland and Ireland. Although the evidence did not support the view that there is a progressive physical deterioration of population the committee was impressed by the gravity and importance of the facts disclosed and suggested the necessity of a periodical examination or estimate of the health of the people. Among the important recommendations made were those pertaining to anthropometrical measurements at certain periods, of height, weight, chest girth maximum and minimum, head length, breadth and height, breadth of shoulders by Callipers and breadth of hips, also tests for vision and hearing.

The evidence in relation to the condition of the teeth was sufficient to prove conclusively that the condition of the teeth was not nearly so good as formerly; the increased dental decay and early absorption of teeth sockets in jaws is sufficient to attract the attention of medical men.

Is Insanity on the Increase in the British Isles?

In England, Wales and Scotland the question of increase of insanity has been under consideration by the Commissions in Lunacy who control the asylums in the above countries. The men composing these commissions are of high professional and business attainments.

Their report for England and Wales indicate that the numbers of insane under care have been increasing at a greater ratio than the growth in population. The report includes the investigation of age in relation to frequency of mental disease, also sex and variety, whether the organic forms occur more frequently than formerly, and cause of each form. Dr. Clouston who has been medical Supt. of the Royal Edinburgh Asylum for more than three decades, and is the leading authority throughout the British Empire, states that the most fatal disease sent to the above asylum, General Paralysis, has markedly increased, both in proportion to the population and admissions and also absolutely in numbers. He also states that the ratio of alcoholic insanity is steadily increasing. The commissions have been in existence for more than half a century and have after looking into the question carefully advised against large asylums and recommended the hospitalization of all as far as possible.

The British Medical Journal Library and Reading Room.

This leading medical journal has for its home a very central location on the Strand with the Charing Cross Hospital on the opposite corner of street. The clerical force is located on the ground floor; the immense library with librarian in charge on the second floor.

The leading medical journals of the world as well as this vast library are available to members who constantly improve the splendid opportunity for study and research. The writer was shown every courtesy and given the privileges of the library while in London. It is sincerely hoped that the profession of the city of Detroit will rise to a sense of duty and take steps towards providing a home and a nucleus for a library which will eventually increase and develop and place our fairest city in line with other progressive American cities.

SAMUEL BELL, M.D.

* Notes taken during recent trip to England.

(Congenital Umbilical Hernia) — Charles Greene Cumston says that congenital umbilical hernia arises only through the ring, the periumbilical variety occurring only in the adult. Some contain viscera which have never been in the abdomen, on account of lack of closure, while in others the viscera forming the contents protrude after having been normally placed in the abdominal cavity. The

author divides this type of hernia into embryonal and fetal hernia, the latter developing after the completion of the third month of intrauterine life. Embryonal hernia has three varieties: umbilical eventration, characterized by an arrest of development of the abdominal walls, or a defect of union of the walls; diverticular hernia, due to the persistency of the vitello-intestinal duct, which opens into the intestine by an orifice called the intestinal umbilicus; hernia of the vitelline loop, characterized by the presence of the intestinal loop united to the vitello-intestinal duct at the base of the chord, which has remained adherent to the umbilicus. The contents of these herniae may include almost any of the abdominal viscera, and even the heart has been found in them. Aside from the intestine the liver is most frequently found. Congenital umbilical hernia develops after the formation of the abdominal ring. The viscera are contained in a sac formed of peritoneum. The sac is usually ruptured during labor. When not ruptured it is transparent. The two umbilical arteries are usually situated outwardly and below, the vein above the rest of the mass. Malposition of the viscera is common, as well as hypertrophy. The mesentery may be longer than normal. The malformations accompanying this condition are generally of the genitourinary organs, double uterus, epispadias, bifid penis, etc. There may be malformation of the intestine such as stricture, absence of anus or rectum, or occlusion. Congenital umbilical hernia is rare. The condition results from the failure of the somatopleure to reach the median line on account of arrested development. If this occurs all along the median line the thoracic as well as the abdominal viscera are left uncovered. Or the somatopleure may remain thin and transparent. Another cause is a defective regression of the omphalomesenteric duct. A third is the persistency of the umbilical vesicle, which draws the part of the intestine to which it is attached out of the ring. The hernia may be so small as to be tied in with the cord and cut, and death result from a fecal fistula. The prognosis varies with the form of hernia. It is not absolutely bad in the slighter forms. Operation should be done as soon as possible after birth, as the sac becomes dry and causes inflammation of the viscera. Simple laparotomy, with extirpation of the sac, and suture of the freshened border of the wound, will be sufficient in a large number of cases.—[*Medical Record*, September 23, 1905.]

Book Notices.

Under the Charge of

RAY CONNOR.

American Edition of Nothnagel's Practice.—Diseases of the Kidney, Diseases of the Spleen, and Hemorrhagic Diseases. By Drs. H. Senator and M. Litten of Berlin. Edited, with additions, by James B. Herrick, M. D. Octavo of 816 pages, illustrated. Cloth, \$5.00 net; half morocco, \$6.00 net. W. B. Saunders & Co., Philadelphia and London. 1905.

With the appearance of this volume the American edition nears completion as only the heart remains to be translated. It was necessary to include the spleen and hemorrhagic diseases with the kidney for the sake of uniformity in the series. The volume before us is practically a monograph on the subjects considered and as such can be read quite independently of the rest of the practice. The American editor has added many notes to the original but they are clearly distinguished from the rest of the text. The surgical treatment of Bright's Disease seems to be in favor neither with the German author nor the American editor. Articles on Cryoscopy and the Phloridzin test have also been added in the translation.

The sections on the spleen and hemorrhagic diseases are from the pen of Professor Litten. The book is well illustrated and makes available for the English reader these exceedingly valuable works of reference which until now have only been accessible to the student of German. Dr. Stengel and his collaborators are to be congratulated on the zeal and industry which has achieved this result.

A Text-Book of the Practice of Medicine.—By James M. Anders, M. D., Ph. D., LL. D. Seventh edition, revised and enlarged. Octavo of 1,297 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co., 1905. Cloth, \$5.50 net; sheep or half morocco, \$6.50 net.

This popular text-book has passed through seven editions in about as many years and still continues to hold its place in the regard of students of medicine. The author takes up his descriptions of disease in a very systematic way, giving first the definition of the disease, then an historical note when desirable, then pathology, etiology, clinical history, diagnosis, prognosis, and treatment. As is well known, the author is no therapeutic nihilist and gives usually full sections on treatment, much to the satisfaction of the average student.

Numerous tabular presentations of the points of distinction are given under differential diagnosis and will continue to prove helpful. Among the new subjects introduced in this edition are: Rocky Mountain Spotted Fever, Examination of Patients for Diagnosis of Diseases of the Stomach, Splanchnoptosis, Cammidge's Tests for Glycose in the Urine, and Myasthenia Gravis.

Paragraphs have also been added on Pseudotuberculosis, Benign Cirrhosis of the Stomach, Intestinal Lithiasis, Intestinal Calculi, Red Light in Variola, Adams-Stokes' Syndrome and other topics. Certain sections have been rewritten and additions made to bring the work up to the latest discoveries and at the same time give the student the advantage of the author's constantly growing experience.

A Text-Book of Clinical Diagnosis.—By Laboratory Methods. For the use of students, practitioners, and laboratory workers. By L. Napoleon Boston, A. M., M. D. Second edition, revised and enlarged. Octavo of 563 pages, with 330 illustrations, including 34 plates, many in colors. Philadelphia and London: W. B. Saunders & Co., 1905. Cloth, \$4.00 net; sheep or half morocco, \$5.00 net.

It is unusual for a book to require a second edition within a year after its prior appearance. The volume before us, however, seems to have met so general a need amongst students and practitioners of medicine as to necessitate this. The time is so short that no great changes have been made in the text or general scope of the work. The body of the book shows little alteration although the addenda has been considerably expanded. Seventeen new pages have been added including articles on Biff's New Hemogelometer, Ficker's Typhoid Reaction, Leishman-Donovan's Bodies and other recent topics. Cyto-diagnosis is more fully considered than in the first edition. A number of new illustrations have been added and the general attractive appearance of the book retained.

Jackson on the Skin.—A Ready Reference Handbook on Diseases of the Skin, by George T. Jackson, M. D. Fifth edition, enlarged and thoroughly revised. In one 12mo volume of 676 pages, with 91 engravings and 3 colored plates. Cloth, \$2.75 net. Lea Brothers & Co., Philadelphia and New York, 1905.

To the specialist in that branch an alphabetical arrangement of diseases does not appeal but to the busy practitioner and to the student it fills a practical need, as emphasized by the demand for another edition of Dr. Jackson's excellent Handbook.

The great value of the work lies in the clearness of its symptomatology and diagnosis and the mature judgment used in its therapeutic recommendations. The appendix, containing formulae for baths, lotions, ointments, powders, etc., and prescriptions for internal treatment, is especially valuable.

The new edition presents a thorough revision of the subject, so that the work may be consulted as a true exponent of the science of Dermatology to date.

As heretofore, symptomatology, diagnosis and treatment are specially considered. Many new sections have been added, resulting in a considerable enlargement of the work.

A. P. B.

Taylor on Sexual Disorders.—A Practical Treatise on Sexual Disorders in the Male and Female. By Robert W. Taylor, A. M., M. D. New (third) edition, enlarged and thoroughly revised. In one octavo volume of 575 pages, with 130 engravings and 16 colored plates. Cloth, \$3.00 net. Lea Brothers & Co., Philadelphia and New York, 1905.

The scope of the book and the demand for another large edition of Dr. Taylor's excellent work are best comprehended by quoting, in part, from the author's introduction:

"It certainly can be stated . . . that until recently the subject of sexual disorders had been treated in books and essays in a loose and impractical manner. This condition was due to the facts that the study of these affections was not thoroughly entered into and that the necessary ground work of pathological anatomy had been entirely neglected. . . .

The endeavor has been made to fully describe the anatomy and physiology of the whole sexual apparatus in a scientific and philosophical manner, and in doing so the results of extended personal investigations have been incorporated. The importance of urethral inflammations as an underlying cause of sexual impairment has been duly emphasized. Much care has been bestowed on the description of chronic affections of the prostate. . . . The conditions of the seminal vesicles and their relation, when diseased, to sexual disorders have been fully elaborated. . . . In fact, the basis of the study of genito-urinary diseases will be found in this book.

The subject of sterility in women is considered in a general manner, with the idea of conveying to the mind of the reader the conditions which tend to render a woman infertile. The various forms of sexual disorders in women are fully considered."

The text has been thoroughly revised to date and the sections enlarged. Four completely new chapters have been added with a number of new illustrations, mostly original.

Dr. Taylor's work is practically the only one in English in its exact field, and its great practical worth is clearly reflected in the demand which affords such frequent opportunities for revision.

A. P. B.

International Clinics.—Edited by A. O. J. Kelly, A. M., M. D. Volume 11., Fifteenth Series, 1905. 316 pages. Cloth, \$2.00. J. B. Lippincott Company, Philadelphia and London, 1905.

This number of the Clinics is quite up to the high standard of the past. Under treatment, Dr. Morse considers the acute nephritis of childhood and Dr. D. B. King of Edinburgh the use of Adrenalin in pulmonary hemorrhage. In the section on medicine, Dr. Willson of Philadelphia, considers very fully the diagnosis of incipient thoracic tuberculosis and Dr. Benedict advances a novel theory as to the etiology of seasickness.

Drs. Lermoyez and Berlin of Paris report two

cases of acute purulent generalized meningitis operated on by them after a diagnosis had been made by lumbar puncture. The dura was exposed but not opened in one case and freely opened in the other. Both cases recovered rapidly after operation. A timely article is included in this number on Scopolamin anesthesia, giving the dosage and reviewing the fatal cases so far reported. This would seem to give in certain cases at least a very good anesthesia without any preliminary stage of excitement or any post operative nausea. It can often be combined with chloroform with a great saving of the latter.

Single articles are given under the sections of Gynecology, Ophthalmology, Rhinology, Physiology and Pathology. The volume is illustrated with plates, charts, diagrams, etc. The book is very nicely gotten up and will be welcomed by a large circle of friends.

Therapeutics: Its Principles and Practice.—By Horatio C. Wood, M. D., LL. D. Twelfth edition, thoroughly revised and adapted to the eighth edition of the United States Pharmacopoeia, by Horatio C. Wood and Horatio C. Wood, Jr., M. D. Cloth, \$5.00. Pages, 908. J. B. Lippincott Company, Philadelphia and London, 1905.

This standard work is almost too well known to the profession to require any extended notice. The authors have taken the appearance of the new pharmacopoeia as the occasion of a revision of this important work. The large number of changes which have been made in this new pharmacopoeia have almost necessitated a revision of this class of works. Over seventy new drugs are discussed in this edition, amongst them: argyrol, thiosinamine, ursotropon and others of like importance.

The book continues its two-fold mission as a text-book for students and a reference work for practitioners of medicine. A detailed consideration of local anaesthesia, including the so-called spinal and neural anaesthesias, is among the new features of the book. The old question of the best general anaesthetic is fully discussed and the authors conclude that the surgeon is not justified in using chloroform unless under certain circumstances and for certain definite reasons.

The general arrangement of the work and its general appearance has not been greatly changed in this edition and the book continues to hold the same high position which has been accorded to it for the past quarter of a century or more.

Handbook of Anatomy.—Being a complete Compend of Anatomy, Including the Anatomy of the Viscera and Numerous Tables, by James K. Young, M. D. Second edition, revised and enlarged. With 171 engravings, some in colors. Crown octavo, 404 pages, extra flexible cloth, rounded corners, \$1.50 net. F. A. Davis Company, Philadelphia, 1905.

The call for a new edition of this book has been made the occasion for a revision of the text and illustrations. The number of the latter have been rather more than doubled and the size and number of the pages have been increased. The work is based on Gray and Morris and is intended for use in connection with one or the other of these standards.

The book is well printed and should prove useful not only to the student but also to the practitioner who desires to brush up his half-forgotten anatomical knowledge.

Progress of Medical Science.

MEDICINE.

Under the Charge of

H. D. JENKS.

The Stokes-Adams Syndrome.—This is a disease characterized by vertigo, syncope, loss of consciousness and a slow pulse, a pseudo-apoplexy. Riegel has found that from an examination of 7,567 cases 1,041 had pulses below 60, yet of these but 47 had circulatory disease. There seems to be many cases where a slow pulse is physiological. Napoleon is said to have had a normal pulse of 40. Vigoroux speaks of a laborer who had a pulse of 20, yet was capable of a great deal of hard work.

This disease occurs in patients with demonstrable cardiac lesions, or with changes in the nervous system. Two cases are reported in detail, one a man 57 years old began with vertigo, headache and pain in the chest. Attacks were common in the morning or on stooping. Pulse was 38, full and regular. Cardiac area enlarged. The faintest systolic, however, could be detected at apex. In horizontal position pulse was 32, on exercise it was 44. Diagnosis of myocordial degeneration was made. Rest in bed relieved the vertigo for a while. About six weeks later, while in a wheel chair without any exertion or pain he collapsed and died. Before death his pulse ranged at between 20-30. The other patient was a man of 19, had a sore throat; after three cultures diphtheria was found, but it was very mild; three months later, although he had been working, in the evening had pain in his stomach. On getting up next day in dressing he fell forward on the floor, but soon revived. He had severe pain in head and chest. In attempting to vomit he fell forward in opisthotonos, respiration ceased, face became cyanosed. This lasted 20 or 30 seconds, then he began to breathe and recovered consciousness. His pulse was 16, heart enlarged. There were seven attacks that day. After the last one his pulse was 24. Next day 40. Two years later he had another attack, in which his pulse was 30-36. Heart's area smaller than in previous attack. At present his pulse is 80-90, with normal heart sounds.

In 1,000 cases of diphtheria but three cases of bradycardia were found, but these were at end of second week. Pulse was 20-30 and death resulted. In diphtheria the majority of heart symptoms are due to changes in pneu-

mo gastric nerve, according to McCollom, but Baginsky and Rosenberg believe diphtheria a common cause of myocarditis.

It was at first believed that fatty changes in the heart were the cause of the symptoms, but now that nervous system takes part, arterio-sclerotic in nature affecting the brain and medulla. They usually occur in older individuals, but may come at any age. One attack may be fatal, or there may be repeated attacks.—(Foley: Boston Medical and Surgical Journal, August 31, 1905.)

The Advantages of Sanatorium Treatment of Tuberculosis.—F. M. Pottenger (Los Angeles, Cal.) believes patients can be treated best in a sanatorium because (1) they are under the immediate and constant guidance and control of the physician, who can see that they do the things which are necessary to help bring about a cure, and prevent them from doing things which tend to lower vitality and retard progress. (2) They are furnished with apartments suitably lighted and ventilated, and with foods adapted to their needs and properly prepared. (3) They can be given the advantages of all scientific measures which have proved of value in treatment. Good food, fresh air and careful guidance are the basis of treatment, but the tuberculous individual is not receiving the best that can be had until we give him the benefit of all scientific aids, and of these especially to be recommended are: hydrotherapy, the chemic rays, culture products, and direct medication of the upper air tract.—(American Medicine, September 9, 1905.)

Convenient Points for Making Intra-Muscular Injections in the Treatment of Syphilis.

Victor Cox Pedersen describes and illustrates a plan of subdividing the two gluteal regions into four quadrants and making three injections in each of these in rotation in such a manner that the same spot is made the site of operation only once in thirteen weeks. He also describes the technique of injection and says that in several hundred injections made in this way he has never had any tendency to infection or the production of painful swellings lasting more than two days, and even these have been rare.—(Medical Record, September 2, 1905.)

NEUROLOGY.

Under the Charge of

GUY L. CONNOR.

Vertigo.—I intend to confine myself entirely to true rotation, to an actual sense of rotation on the part of the patient, or to actual rotation as a forced movement and such rotation, as a rule, accompanied by nausea. I am not in any way presuming to trench upon the wide field of the physician, namely, where we have rotation indistinguishable from dizziness. And further I must admit a considerable limitation, because my experience is drawn practically from only two classes of patients, namely, cases of destructive ear disease on one hand and new growths on the other. I have seen a considerable amount of Meniere's disease that has been referred to me from time to time, but of such conditions as laryngeal vertigo I know nothing.

Severe vertigo is a sudden disturbance of equilibration. What we want to know is whether this disturbance occurs in the periphery (in the semi-circular canals), whether that disturbance in the periphery is produced by pressure in the middle-ear upon the labyrinth, or whether the mischief is not in the trunk of the vestibular nerve, in the bulb, cerebellum, pons, crus, or cerebral cortex.

Cases of semi-circular canal disease require more attention in the direction of localization. We do not get true rotation (objective rotation and forced movement) from simple middle-ear disease. We do not get such forced movement until the vestibular trunk or wall of labyrinth is implicated.

I am not aware that true vertigo has resulted from disease of the vestibular nerve except when that has occurred in the form of new growths.

It is almost impossible to differentiate between disease of the trunk of the eighth nerve as it lies under the peduncle of the flocculus and disease of the cerebellar nuclei of Deiter's nucleus or the other vestibular nuclei. In every case of disease of the vestibular nerve or its nuclei, we have two disorders of equilibratory orientation (true rotation and titubation). This is the first stage in the equilibratory mechanism at which titubation comes in as a clinical symptom. A lesion situated any where from this point to the temporal cortex may cause titubation.

In the cerebellum, we have two distinct organs (the lateral lobes and the vermis). Whereas the vermis is concerned with rotation round a horizontal plane of the body, the lateral lobes are concerned with rotation round the vertical axis of the body and often in a circle with a wide rad-

ius. From either of these two organs or divisions of the cerebellum, we may get the rotation of a vertigo, localization of which is comparatively precise.

In disease of the posterior two-thirds of the temporal lobe, patients at least have that disturbance of equilibration, namely, titubation. These cases naturally present associated symptoms of hemianopsia and affection of smell and taste.

Treatment.—As regards middle-ear disease, we treat the disease of the bone and mucous membrane by ordinary surgical rules. As regards Meniere's disease—that is to say, where, in conditions of gout or allied state, congestion of the semi-circular canals has been diagnosed, and the cases have been referred to me with the view of the division of the eighth nerve—I can only say that, although I have been quite ready to divide the eighth nerve, I have never yet done so. The only reason I can assign is that I usually have advised that such cases should be treated first with (1) Weir-Mitchellism, (2) with hydrobromic acid, and (3) with anti-gouty treatment, and they have not returned. Whether the treatment has been successful and the operation rendered unnecessary I cannot say, or whether the patients have taken other advice. With regard to disease of the central apparatus, such disease is almost invariably a new growth, and then treatment becomes simply a question of removal of the growth in accordance with the localization of its seat.—Victor Horsley, *The Journal of Laryngology, Rhinology and Otology*, August, 1905.)

Syphilitic Epilepsy.—J. T. Moore, Galveston, Texas (*Journal A. M. A.*, June 10), gives an account of a case of epilepsy occurring in a man 35 years of age who had suffered from an alleged fracture of the right frontal bone about five and a half years before, the epilepsy dating back about three years. Syphilis was denied. The convulsions began on the right side of the face and extended from there over the rest of the body. The focal symptoms did not warrant operation, and as there was some roughening of the tibia and some enlarged glands, he was given iodid of potash in gradually increasing doses. The attacks, however, became more frequent and severe, in spite of the use of bromids, chloral, etc., and in a few days he was put on 1/10 grain doses of bichlorid of mercury, with the result of rapid improvement and complete cessation of the attacks.

SURGERY.

Under the Charge of

MAX BALLIN.

Acid Intoxication and Late Poisonous Effects of Anesthetics. Hepatic Toxemia. Acute Fatty Degeneration of the Liver Following Chloroform and Ether Anesthesia.—Report of the case of a girl of twelve and one-half years old, who was operated upon for an ovarian cyst gangrenous after torsion of pedicle. Forty-four hours after the operation, delirium, coma. Slight fever developed terminating in death, 110 hours after the operation. The autopsy revealed local purulofibrinous peritonitis about field of operation and fatty changes in the liver, swollen spleen, slight nephritis.

Thirty (30) cases were collected of this important post-operative complication from the recent literature, 28 of which ended fatally. Experiments on animals have shown that this complication is mainly due to chloroform.

Following are the conclusions:—

1. Anesthetics, especially chloroform (ether to a very limited degree) can produce a destructive effect on the cells of the liver and kidneys and on the muscle cells of the heart and other muscles, resulting in fatty degeneration and necrosis, very similar to the effects produced in phosphorus poisoning.

2. The constant and most important injury done is that to the liver.

3. There are certain predisposing causes which favor this destructive effect of chloroform, among which are: (a) age—the younger, the more susceptible; (b) causes which lower the general vitality of the individual and probably the vitality of the liver cells, such as diabetes, previous recent anesthetics, infections from pus germs, diphtheria, intoxications from a dead fetus in the uterus, a gangrenous mass in the abdominal cavity, etc.; (c) exhaustion due to hemorrhage; (d) exhaustion due to starvation; (e) exhaustion due to wasting diseases, such as carcinoma; (f) lesions which resulted in extensive fatty degenerations, such as occur in the limbs of infantile paralysis; (g) chronic diseases involving both liver and kidney, such as cirrhosis and nephritis.

4. These toxins produce a definite symptom-complex which makes its appearance from ten to 150 hours after the anesthesia. This symptom-complex of vomiting, restlessness, delirium, con-

vulsions, coma, cheyne-stokes respiration, cyanosis, icterus in varying degrees, and usually terminates in death.

5. It is probable that milder degrees of this poisoning are recovered from and that the transient icterus noticed after chloroform anesthesia without other evident cause is due to such poisoning, and many cases which exhibit restlessness, fright, mild delirium, drowsiness, etc., after anesthesia may be due to the same cause.

6. Postmortem reveals fatty degeneration of the liver, fatty degeneration and mild degree of inflammation of the kidneys, and, in extreme cases, fatty degeneration of heart and other muscles.

7. This fatty degeneration of the liver with hepatic toxemia, following anesthesia is almost invariably due to chloroform in the fatal cases. Ether is seldom the cause of a death of this kind. —(Arthur Dean Bevan and Henry Baird Favill, *Journal of the American Medical Association*, Vol. XLV. No. 11.)

Pathological Spleen.—1. The more probable function of the spleen is the manufacture of red blood corpuscles, with the strong probability of an internal secretion of value in regulating the relative proportions of the various elements of the blood. 2. Splenectomy is contraindicated in leukemia, amyloid spleen, splenic hypertrophy secondary to hepatocirrhosis, secondary malignant disease and in the essential anemias. 3. It is usually preferable to splenopexy in wandering spleen, which is almost always due to previous hypertrophy. 4. In splenic abscess, if successful drainage is possible, it is better than splenectomy, especially if the splenic tissue is not destroyed. 5. In case of cysts, benign tumors, tuberculosis and sarcoma, splenectomy is the operation of choice, unless in the three former conditions resection of the lower extremity of the organ will remove all the disease. 6. In rupture, the organ should usually be removed. The operation should be prompt and expeditious and with every expedient to relieve and to prevent shock. 7. In the severe type of malarial spleen, with failure of any medical relief, splenectomy will often result in cure. 8. In splenic anemia internal medication fails and the only recourse is to splenectomy, as early as possible, while the patient can endure the operation and before incurable complications have arisen.—(B. B. Davis *Journal of the American Medical Association*, September 2, 1905.)

GYNECOLOGY AND OBSTETRICS.

Under the charge of

B. R. SCHENCK.

When Shall the Cervix Uteri Be Repaired?—

Most obstetricians agree that laceration of the cervix uteri occurs in nearly every labor. This idea is so firmly fixed that if a cervix is seen without some sign of laceration it is believed to belong to a nullipara. About 25 per cent. of these lacerations heal spontaneously. As to the amount of harm resulting from unrepaired lacerations there is a great diversity of opinion. Emmet said that at least one-half of the ailments of women who have borne children were to be attributed to them, but the more mature judgment and experience of gynecologists teach that although there is exaggeration in this statement, there is much truth. On this point Gardner reviews the opinions of various authors.

The operation may be *immediate* (directly after birth); *intermediate* (from the fifth day to the end of the puerperium), or *remote* (any time after the puerperium).

Advantages of the Immediate.—It requires but a few minutes; it is painless or requires but a few more whiffs of chloroform, if the latter has been used; less inconvenient to physician and patient; can be done at home; prevents sepsis; removes the most frequent cause of subinvolution; no particular operation, device or instrument is necessary; it gives a good result and has been successful in the hands of able surgeons. *Disadvantages*—In 25 per cent. of cases, no repair is necessary; suture is difficult, because the cervix is stretched, swollen and distorted; bleeding obscures the field of work; puncture points of needles bleed about as freely as do the torn surfaces; sepsis may be carried by sutures, fingers and instruments; traction on the uterine supports may be productive of uterine prolapse or displacement; manipulation at this time may cause embolism; when shrinkage takes place, the surfaces are exposed to infection just the same as before suture; after contraction, the sutures hang like rings and accomplish nothing; it may interfere with drainage; assistance is necessary; deliberation and due care are impossible at this time; there is a bad effect upon the morale of the patient.

Advantages of Intermediate Repair—Less danger of infection; contraction has taken place and the approximation is more accurate and permanent; the patient is in better condition; time and assistance can be arranged to better purpose. The *disadvantages* are: It breaks into the convales-

ence; second anæsthesia disturbs the nursing of the baby.

Advantages of the Remote Operation—Twenty-five per cent. heal spontaneously; even when there are moderate tears, there may be no symptoms; treatments will relieve symptoms. The *disadvantages* are: Many women will bear pain and suffering for many years without consulting a physician; health may be so undermined that it requires a long convalescence.

After discussing these points the author arrives at the following conclusions:

1. Many ills are the result of unrepaired lacerations of the cervix.

2. The frequency and extent of these tears may, to a certain extent, be lessened by allowing more time for dilatation in the first stages of labor; by a more judicious use of the forceps in time and force; and by the proper use of podalic version.

3. The most frequent cause of subinvolution of the uterus and prolonged convalescence is unrepaired lacerations.

4. In all probability many of the frequently quoted morbid conditions ascribed to lacerations are the result of infection of the lacerated surface rather than the laceration itself.

5. Many cases of severe hemorrhage are due to unrecognized cervical lacerations.

6. Immediate repair in the hands of an able surgeon-obstetrician is the best means of controlling such hemorrhage, and also of preventing infection of the torn surfaces.

7. Primary tracheloplasty is easily and quickly done, but a secondary repair is a difficult and tedious procedure.

8. In case of failure in obtaining union in the primary operation, the condition of the woman is none the worse, while if successful, which is usually the case with skillful surgeons, the patient is spared many of the ills which lacerations of the cervix sooner or later entail.

9. In regard to teaching medical students, it seems as if the matter should be fairly placed before them. Where hemorrhage persists with a well-contracted fundus, they should be taught to look out for spurting vessels in the lacerated cervix, and to suture. As to immediate repair without hemorrhage, they could be taught its advantages, and as in other departments of surgery, they should have deeply impressed upon their minds the evils which might arise from poor technique and lack of asepsis.—(Gardner: *Medical Record*, August 26, 1905.)

DERMATOLOGY, SYPHILIS AND CUTANEOUS RADIOTHERAPY.

Under the Charge of

A. P. BIDDLE.

The Diagnosis of Cutaneous Syphilis.—E. A. Fischkin, Chicago (Journal A. M. A., July 8), concludes from his observations and studies that the elements of diagnosis in cutaneous syphilis have only an arbitrary value. The element of time is unreliable; it may happen that simple sores with consequent gland swellings will develop in intervals corresponding to the periods of syphilis. Regionary lymphadenitis is not absolutely pathognomonic of syphilis. Indolent and indurated inguinal and cubital glands may follow infection of simple wounds. The ensemble of all syphilitic symptoms may be closely imitated by non-specific dermatoses. Syphilis can only be diagnosed with absolute certainty when based on positive as well as on negative findings, i. e., when we not only find the characteristic elements of syphilis, but when we can with certainty exclude all other skin diseases that may appear with similar symptoms.

Tooth and Nail Corrugations.—Excepting Hutchinson's notches, the corrugations of the teeth and nails are not much mentioned in medical literature, and G. Lenox Curtis, New York (Journal A. M. A., August 5), remarks that this neglect is a mistake and that they have a decided pathologic significance. From the study of many cases he is satisfied that the transverse lines on nails and teeth are caused by autointoxication resulting in rheumatism, and that the severer the attack the more prominent are they. Children whose mothers suffered from rheumatism during pregnancy and those that have rheumatism themselves during the period in which the enamel of the permanent teeth is developing show these corrugations. The longitudinal indentations on teeth and nails, Curtis thinks due to autointoxication from intestinal indigestion, and that white spots on the nails also indicate autointoxications. When these markings are absent, a corresponding absence of the diseases may be assumed. The nail markings have importance owing to the fact that they are temporary, being obliterated in a month or two by the natural growth of the nail. They are, therefore, indications of recent disease.

Syphilitic Spinal Paralysis, with Special Reference to the Type Described by Erb.—W. Dougherty discusses this syndrome, the distinguishing features of which, as described by

Erb, are feebleness in the lower extremities, more or less spasticity and exaggeration of deep reflexes, together with vesical and possibly rectal derangement and slight but quite constant disturbances of sensation. The lesion is not the expression of any definite pathological process, but Erb states that the main factor is the combined system disease by the side of which the transverse lesion appears as etiologically a quite permissible complication. According to the author, the time that has elapsed between the primary infection and the onset of symptoms indicating medullary involvement must be taken into consideration, and those cases developing within a few years after the luetic infection, even though slow in onset may be looked upon as an expression of secondary or tertiary syphilis, whereas, if a considerable period of time has elapsed before the beginning of the symptoms referable to the cord and changes must be due to what he calls the terminal syphilitic stage. He describes the histories and pathological findings in two cases of the former class, which lead him to conclude that it is the distribution and dissemination of the vascular lesion rather than any special difference in their nature which determines which type of spinal syphilis shall ensue, and that the so-called Erb's syphilitic spinal paralysis is not, as Erb is inclined to believe, necessarily dependent upon a system disease of the spinal cord.—*Medical Record*, August 5, 1905.

A System of Venereal Prophylaxis that is Producing Results.—G. Shearman Peterkin (Seattle, Wash.) says the education of the individual in the law of sex is the only feasible means, at our present stage of evolution, of lessening or preventing venereal diseases. From sociologic, economic, ethic and physiologic laws, etc., scientific facts are taken as premises, and from these conclusions drawn to prove that this fact must be recognized. With these principles as a working basis, pamphlets—five in number—have been issued by a Committee on Prophylaxis of Venereal Diseases of the Washington State Medical Association. The pamphlets are appended in full, and Dr. Peterkin gives the reason for using them as a means of disseminating such knowledge and for presenting the amount and character of knowledge they contain. The position is taken that business principles of to-day can be ethically make his own morality, to the next succeeding evolutionary stage of his morality.—(*American Medicine*, August 19, 1905.)

THERAPEUTICS AND PHARMACOLOGY.

Under the Charge of

W. J. WILSON, JR.

The Treatment of Erysipelas by the External and Internal Use of the Tincture of the Chloride of Iron.—As regards the local application of this remedy in this disease. I have been unable in any literature to find any reference to its use. Various other procedures are mentioned, but in my experience none can equal in efficacy the local application of the tincture of iron. In this connection, however, it is well to state that the treatment as laid down by modern writers should not be neglected—scrupulous cleanliness, pure air, water, sunshine, etc., and a rigid antiseptic treatment of any existing wound, together with the general precautions commonly taken in other infectious maladies.

Case 1.—Miss 6, aged eighteen. The patient suffered a prolonged rigor followed by intense fever (105 deg. F.) with general malaria and vomiting, all symptoms in fact pointing to a severe infection. The following day an acute dermatitis beginning at the naso labial fold appeared, quickly followed by the whole side of the face assuming a swollen and characteristic hue, with burning heat and pruritus. Various well-known remedial applications were faithfully tried—antiseptic compresses, carbolic acid lotions, corrosive sublimate, tincture iodine, ichthyol, etc.

The erysipelatous inflammation continued to spread until the whole head was affected, scalp and all, so that it created a most decided deformity.

Internally quinine, aconite, phenacetine, etc., were prescribed in attempts to relieve the patient from the intense suffering without any appreciable results.

The patient seemed to go from bad to worse, with no improvement. Finally, the tincture of the chloride of iron was painted freely all over, the head, the hair having previously been cut to admit of the thorough application of the various other remedies. The effect was immediate: twelve hours after the first application the inflammatory symptoms subsided, and in a few days of continued use the patient was convalescing.

I would add that the iron was given in ten-drop doses internally every four hours as well. The method of applying, as I have stated before, was simply painting, once daily, the tincture of the chloride of iron all over the parts

affected, and beyond to healthy tissue, with a camel's hair brush, using no gauze or gum tissue to cover. It would appear in my experience that the local application was the true factor in subduing the external inflammation, by an almost specific action on destroying the specific coccus, as the iron was used internally in conjunction with other topical applications without like result.—(Sickell, *Therapeutic Gazette*, August 15, 1905.)

On the Treatment of Acute Summer Diarrhoea in Infants.—When seen in the early stages there can be no doubt as to the wisdom of the usual practice of giving a purgative and temporarily withholding all milk. The purgative commonly given is castor oil, and in the milder varieties of diarrhoea this acts admirably. In the acute form I prefer calomel for the following reasons: When vomiting is present castor oil is not likely to be retained, but there is a possibility of calomel being so, and in this last event the drug may be of service in the vomiting itself. Calomel, moreover, may act as a slight intestinal antiseptic. Further, it may act indirectly as a diuretic. The chief use of the calomel, of course, is to clean the intestine of any deleterious material and to check vomiting. For the treatment of the vomiting I know of no remedy so successful as that of washing out the stomach with warm water or a mild solution of bicarbonate of sodium. This is most readily and satisfactorily done by means of a soft rubber tube introduced through the nose. After washing out the stomach I often administer a tenth to an eighth of a grain of cocaine in a teaspoonful of iced water. The foregoing measures can be supplemented with safety by a mustard poultice to the epigastrium and the administration of a mixture of the carbonate of bismuth and bicarbonate of sodium along with a quarter of a minim of dilute hydrocyanic acid. The number of drugs that have been advocated for the treatment of diarrhoea is legion and their number is proof of their general inadequacy. By trustworthy authorities resocin, naphthol, salicylate of sodium, salicylate of bismuth, salol, carbolic acid, tannigen and numerous other drugs have been advanced as admirable specifics, but trial of most of them would not lead me to place any great reliance on any one of them.—(Coutts: *The London*, July 29, 1905.)

BACTERIOLOGY AND PATHOLOGY.

Under the Charge of

H. S. OLNEY.

A Simple Stain for Spirochaeta Pallida.—Oppenheim and Sachs have used with success the following method for demonstrating the presence of Spirochaeta in syphilitic material.

A very thin spread is made on a cover glass and is allowed to dry in the air. Without any previous fixing, it is then stained with alcoholic carbo-gentian violet solution, which is composed of 5% carbolic acid solution 100 ccm., and concentrated alcoholic gentian violet solution 10 ccm. The cover glass is held over a Bunsen burner while staining, until vapor arises. Then it is washed carefully in water to remove excess of red blood cells (as these can be removed without disturbing the Spirochaetae), dried between filter papers and mounted in balsam. The Spirochaetae are stained blue and have a larger diameter than those which have been fixed, as the fixing tends to shrink them. The advantages of this method of staining are, the easy finding of the Spirochaetae and the quickness and simplicity of the procedure.—(*Deutsche Medizinische Wochenschrift*, November 29, 1905.)

Primary, Non-Gonorrhoeal Urethritis Due to the Influenza Bacillus.—A young man, twenty years old, had a urethral discharge for two and a half weeks. On examining the discharge microscopically Cohn found no gonococci, although repeated search was made for them. However, a bacillus was isolated which morphologically, culturally and in staining reactions was identical with the influenza bacillus, and he regards this as the cause of the urethritis and cites other cases of non-gonorrhoeal urethritis where several different germs have been found. His case was very resistant to treatment and was not cured after eight weeks in the hospital. There was also a slight epididymitis and cystitis complicating the urethritis.—(*Deutsche Med. Wochenschrift*, Nov. 29, 1905.)

Causes of Gallstones.—Beer comments on Nannyn's theory of gallstone formation; i. e., that stagnation of the bile plus inflammation of the mucosa of the bile passages causes stone formation. He thinks there is another factor. His contention is supported by the results of twelve autopsies. In each of these cases the common duct was occluded for more than 4 or 5 weeks and more or less severe inflammation of the extra and intra hepatic ducts existed. In seven of the cases the obstruction was caused by calculi,

and in five by tumors of various kinds. He argues that if stones are caused by bile stagnation plus mucosa infection, each of these cases ought to show calculi formation in the bile passages of the liver. But in only the seven cases where the occlusion was caused by a calculus in the common duct were stones found in the liver ducts. That is, in only those cases which had had previous gallstones, were there calculi in the liver ducts. Therefore, there must be a third factor in the causation of bile calculi. "Diathesis" is too vague a term. Possibly it is faulty hepatic metabolism.—(*American Journal Medical Sciences*, September, 1905.)

Blood Examinations in Pulmonary Tuberculosis Conclusions.—1. In pulmonary tuberculosis without cavity formation a mild anemia, with a decrease in erythrocytes and a relatively greater decrease in hemoglobin is constant.

2. From the standpoint of prognosis, an increase of erythrocytes, in cases without cavity formation, is of favorable significance.

3. In advanced cases a decrease of leukocytes is of unfavorable import.

4. The actual increase of lymphocytes seems to correspond to the increase of resistance on the part of the organism to the tuberculous infection, but further study is required to confirm this.

5. The transitionals seem to follow the same rule as the lymphocytes in this regard.

6. At the beginning of the investigation the eosinophiles seemed to increase with the patient's improvement, but further study did not support this view.—(*Ullom & Craig, American Journal Medical Sciences*, September, 1905.)

Blister Fluid from Scarlet-Fever and Measles.—I believe that the bodies found in sections of skin from cases of measles and scarlet-fever are part of the protoplasm of the epithelial cells which has been so changed in its chemical nature that its staining reaction differs from that of the surrounding protoplasm. The small, round, extracellular bodies found in the living patients may arise from degenerating cells, but I can not demonstrate this origin with certainty. It certainly can not be stated that none of these bodies is a protozoon, but it can be positively stated that a great majority of them arise from degenerating cells; and in many cases, I think, it is not possible to differentiate a degeneration from a protozoon by the study of its morphology and staining reactions.—(*C. W. Field, The Journal of Experimental Medicine*, Vol. 7, No. 4).